#### PHASE I ENVIRONMENTAL SITE ASSESSMENT

# 3,500-ACRE SAN PEDRO RIVER SITE PINAL COUNTY, ARIZONA

Prepared for:

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> **JULY 2003** Job No. 807.04 A 1060

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# SUMMARY

WestLand Resources, Inc. (WestLand) was retained by Resolution Copper Company to perform a Phase I Environmental Site Assessment (ESA) for an approximately 3,500-acre site along the San Pedro River near Mammoth, Arizona, in Pinal County (the property). Pursuant to the American Society for Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-00), the history and current use of the property and surrounding properties were determined, and a site reconnaissance was conducted.

The purpose of the work was to identify the presence or potential presence of recognized environmental conditions resulting from past or current activities. According to the ASTM guidelines, a recognized environmental condition is defined as the presence of any hazardous substance, at or immediately adjoining the property, under conditions that indicate a past release or the potential for a future release that may present a material risk of harm to public health or the environment.

The ESA has revealed no evidence of recognized environmental conditions in connection with the property or adjoining properties. However, numerous 55-gallon drums and smaller containers are present at various locations throughout the property. Most drums were empty or contained inert materials; in no cases were hazardous wastes observed. A small number (less than 10) of these drums and containers were located at an abandoned ranch facility within the property and were observed to contain potential hazardous substances such as agricultural chemicals (herbicides, pesticides, or fertilizers) or petroleum products (oil and grease) in varying amounts. Limited evidence of soil staining (a few tens of square feet) was observed in the vicinity of the containers at the ranch. The materials present in the drums and containers, and the limited soil staining observed, does not appear to present a material threat to public health and the environment, and thus is considered a *de minimis* issue that is not a recognized environmental condition.

In addition to the drums, several abandoned automobiles as well as decaying agricultural equipment are present at the ranch. Furthermore, wildcat dumping sites (consisting of trash, miscellaneous wrecked automobiles, and additional drums) are scattered throughout the property. No evidence of hazardous waste disposal was observed at any of the wildcat dump sites, although it is likely that small quantities of regulated materials are present in the abandoned cars. It should be noted that, due to the size of the property and limited accessibility, not all drums or containers likely present on-site were found or evaluated for the presence of hazardous substances. However, given the history and nature of site activities, it is unlikely that any on-site drums or containers contain significant quantities of hazardous substances.

The ranch equipment and drums, wildcat dumping sites, and abandoned vehicles likely present more of a housekeeping issue rather than environmental liability. Although widely dispersed throughout the

property and relatively voluminous (due to the presence of numerous cars), the dumping does not appear to have included any hazardous materials (other than the above-mentioned petroleum products and other chemicals associated with mechanized equipment and cars) or hazardous waste. Cleanup of the property would likely consist of collection and disposal of the miscellaneous waste materials, cars, and equipment; proper disposal of the agricultural chemicals; and excavation and disposal of a relatively small amount of petroleum-contaminated soil.

Similarly, no off-site sources of known recognized environmental conditions impacting the property were identified. Numerous *potential* sources are present, including underground storage tank sites, mine and smelter facilities, and a sewage treatment plant, all of which are upgradient and/or upstream from the property. However, no specific evidence of discharges to the property, either from our observations or from regulatory agency databases, suggests that the property has been impacted by adjoining or nearby property activities.

# INTRODUCTION

Resolution Copper Company retained WestLand Resources, Inc. (WestLand) to perform a Phase I Environmental Site Assessment (ESA) of a 3,500-acre site along the San Pedro River near Mammoth, Arizona (the property), as depicted in Figure 1. The property is defined as a set of contiguous parcels of largely undisturbed land, with some areas cleared for agricultural purposes and roads (Figure 2).

## PURPOSE

The purpose of this investigation was to identify areas of potential contamination on the property, or sources for potential contamination migration from the immediately adjoining areas. This investigation has been conducted as part of the due diligence investigation for property owners suggested by regulations promulgated pursuant to the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA, a.k.a. Superfund) and the *Superfund Amendments and Reauthorization Act of 1986* (SARA).

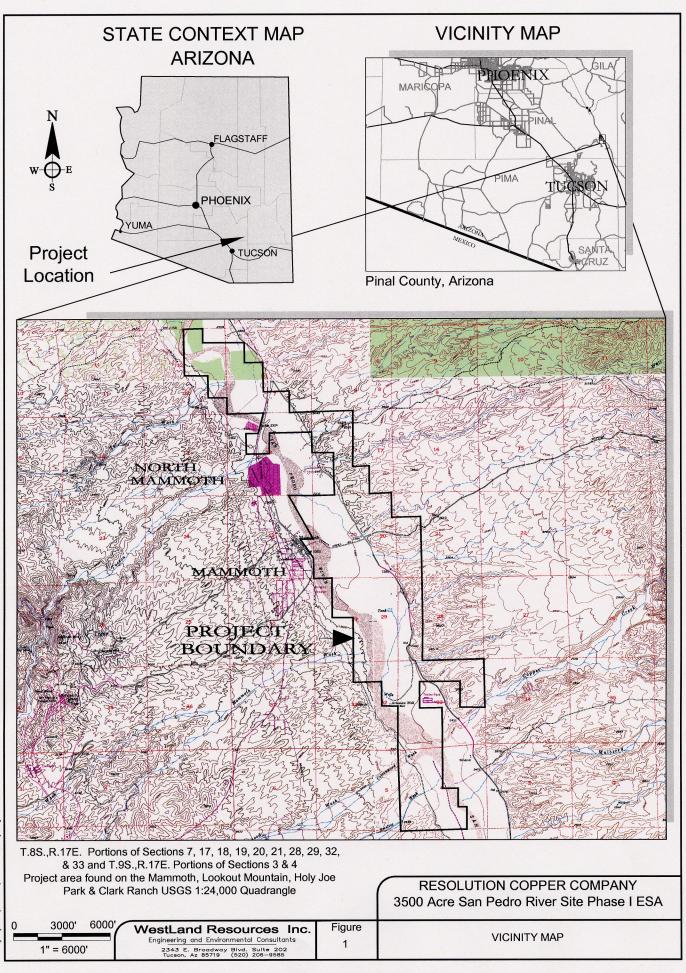
# SCOPE OF SERVICES

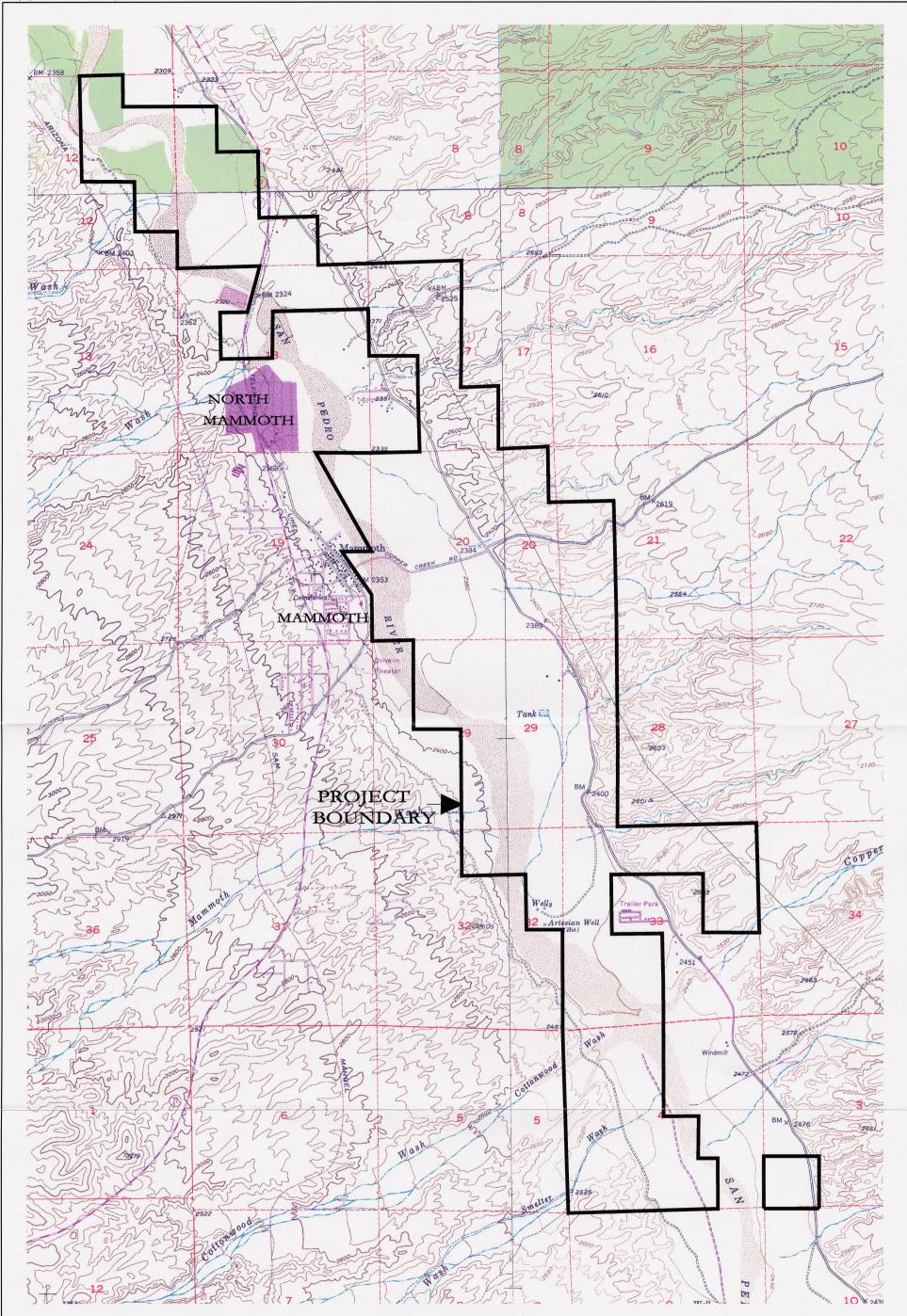
This ESA was performed in general accordance with the American Society for Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (E 1527-00), as described in our June 4, 2003 proposal entitled *Proposal to Complete Phase I Environmental Site Assessment for 3,500 Acres Along the San Pedro River, WestLand Proposal No. P2276.03.* 

The scope of this study is limited to those elements and tasks described in the ASTM Standard Practice E1527-00. The property and adjoining properties were surveyed using both vehicular transportation and foot pacing. Detailed assessment of adjoining properties is not within the scope of this study. A "windshield" survey of adjoining properties was conducted from the property and publicly accessible roads and driveways. Where necessary, the format of this report has been modified from the recommended standard in order to more effectively address site-specific findings and conditions.

# LIMITATIONS AND EXCEPTIONS

This assessment is intended to identify existing or potential sources for hazardous substances on or immediately adjoining the property. Hazardous substances found on the property may be considered a liability if they are present in significant concentrations (i.e., above acceptable limits set by the federal or state government). Similarly, substances offsite may impact the property if the potential for contamination migration exists through exposure pathways (e.g., groundwater). Materials that may







# **RESOLUTION COPPER COMPANY** 3500 Acre San Pedro River Site Phase I ESA

SITE MAP

Figure 2

contain substances that the Environmental Protection Agency (EPA) does not currently deem hazardous were not considered as part of this study.

Hazardous substances that occur naturally in plants, soils, and rocks (e.g., heavy metals, naturally occurring asbestos, or radon) are not considered in this investigation, nor are nuisance environmental conditions, such as dust and other air quality concerns, odors, and noise. Similarly, construction debris (e.g., discarded concrete, asphalt) is not generally deemed hazardous unless observations suggest that hazardous substances (such as asbestos) are likely to be present in significant concentrations within the debris. None of the environmental concerns listed in this paragraph have been addressed in this report.

As noted above, this ESA was conducted in general accordance with ASTM standards. However, a title search was not conducted. As stated in our proposal, "[the *User*] will notify WestLand of any environmental liens or activity and use limitations, if any, that are currently recorded against the property." No such liens or activity and use limitations were reported to WestLand.

# **SPECIAL TERMS AND CONDITIONS**

No special terms or conditions apply to this work.

# USER RELIANCE

This ESA was prepared exclusively for the use of Resolution Copper Company, or their subsidiaries and affiliates, with the care and skill generally exercised by reputable professionals under similar circumstances, in this or similar localities, and may not be utilized by any other party without the written permission of WestLand. No other warranty, expressed or inferred, is made as to the professional advice presented herein.

# SITE DESCRIPTION

# LOCATION AND LEGAL DESCRIPTION

The property is located within the streambed and adjacent upland areas along the San Pedro River near the town of Mammoth, Arizona in Pinal County. A legal description of the property was not available from the property owner; as depicted in Figure 1, the property is within all or portions of the following sections (referenced to the Gila and Salt River Meridian):

- Township 8 South, Range 16 East:
  - Section 12
- Township 8 South, Range 17 East:
  - Section 7
  - Section 17
  - Section 18
  - Section 19
  - Section 20
  - Section 28
  - Section 29
  - Section 32
  - Section 33
- Township 9 South, Range 17 East:
  - Section 3
  - Section 4

# SITE AND VICINITY GENERAL CHARACTERISTICS

The site consists of approximately 3,500 acres along the San Pedro River near the Town of Mammoth in Pinal County, Arizona. The property is located in the San Pedro River Valley, with the Galiuro Mountains to the west and the Santa Catalina Mountains to the south. The Town of Mammoth was founded in 1883 when a man named Frank Schultz located the first mine in the area. Mining was the primary industry for this area through the early 1900s with short-lived resurgence in the late 1930s and 1950s. The most recent mine in the region, the San Manuel Mine, closed in 1999 and is currently undergoing demolition, reclamation, and closure. The current population of Mammoth, according to the 1990 census, is approximately 1,845. Average annual temperatures in the area range from 34 to 97 degrees Fahrenheit with average precipitation at approximately 13 inches per year.

# **CURRENT USE OF THE PROPERTY**

Currently, the property is not actively used for any commercial or residential ventures. It is generally undisturbed river bottom land (stream channel plus overbanks) and upland areas on bluffs on the north

side of the river. It is estimated that less than 15 percent of the land has been cleared for agricultural use (now abandoned) principally for cattle feed (i.e., alfalfa, according to Gerry Brunskill of BHP Billiton).

# **DESCRIPTION OF IMPROVEMENTS ON THE SITE**

Several improved (paved) and unimproved (dirt) public roads cross the property. On the northeast side of the river, River Road is paved from its intersection with AZ 77 southeast through the property and adjacent properties, turning to dirt farther southeast. Copper Creek Road crosses the property from the northeast side of the river to Mammoth; it is paved except where it crosses the streambed. Camino Rio Road accesses the property and adjacent parcels on the southwest side of the river northwest of Mammoth. A dirt road southeast of Mammoth, on the southwest side of the river, is depicted on maps but was reportedly abandoned years ago. Vestiges of this road are present in some locations along the property. Numerous unimproved dirt roads and trails cross the property as well; these appear to have been formed by the general public by convenience to access the river or upland areas. Much of the property is not fenced to prevent public access.

# **CURRENT USES OF ADJOINING PROPERTIES**

A wide range of uses are evident on adjoining properties, including:

- Agricultural,
- Commercial,
- Industrial,
- Residential, and
- Recreational/undeveloped.

Agricultural land use on adjoining properties is limited to one ranch in Section 33, evidently used for raising cattle and growing feed (alfalfa) for cattle. This usage is limited to the overbanks, and the above-described mesquite bosque has been cleared for this purpose. One portion of the ranch had been very recently cleared of mesquite.

Commercial land use on adjoining properties along the margins of Mammoth, in Section 19, generally consists of a variety of small businesses, such as restaurants, bars, and retail sales.

Industrial land use on adjoining properties consists of a sewage treatment plant (operated by the Town of Mammoth) in the northwest corner of Section 18, a Town of Mammoth maintenance yard in Section 18, an inactive sand and gravel quarry in Section 7, and a mine plant site (including a smelter and tailings impoundments) in Section 5. The town maintenance yard includes an informal (unpermitted) waste disposal site, in which empty drums were present but no evidence of hazardous substance disposal was observed. BHP Billiton owns the mine plant site and is also the property owner. The mine plant facilities closest to the property are the tailings impoundments, but are over a mile from the property boundary at

the southeast extreme. Undeveloped land lies between the property and mine plant facilities. The mine plant site has been inactive since 1999 and is currently undergoing demolition.

Residential land use on adjoining properties is present in the towns of Mammoth and North Mammoth (in Sections 19 and 18, respectively) and small unnamed developments in Sections 17 and 33.

Recreational/undeveloped land surrounds the property in all other areas. Recreational use of the land is largely informal: off-road vehicles use the San Pedro River stream bed, and numerous informal roads and trails cross the property and adjacent properties to access the stream bed. A town park is present in Mammoth adjacent to the property; the park includes a baseball diamond and picnicking facilities.

# USER PROVIDED INFORMATION

# TITLE RECORDS

As mentioned above, a title record search was not part of the scope of this study. According to the owner representative, Mr. Gerry Brunskill, the property is owned by BHP Billiton and was obtained from the former owner, Magma Copper Company, in 1991.

## **ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS**

No information regarding environmental liens or activity and use limitations for the property was provided by the user.

# SPECIALIZED KNOWLEDGE

No specialized knowledge of the property was provided by the user.

# VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No information indicating that the value of the property had been reduced as a result of environmental issues was provided by the user.

## OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The owner representative, Mr. Gerry Brunskill, stated that the property is largely inactive land with the only significant former activity being a ranch in Section 20. A greater portion of the property was historically used for cattle grazing: a former corral is present in Section 7 (the locale is known as Patton, after the former ranch operator there) and evidence of cattle grazing is scattered in other areas across the property, including a well, a few stock tanks and ponds, and additional cattle corrals in Section 4. No mining or other industrial activity is known by Mr. Brunskill to have occurred on the property.

## **REASON FOR PERFORMING PHASE I**

This Phase I ESA was performed by WestLand on behalf of Resolution Copper Company in anticipation of a possible future property transaction by BHP Billiton. The purpose of the study was to identify the potential for environmental liabilities associated with the property prior to such transfer.

# OTHER

No other information was provided by the user.

# **RECORDS REVIEW**

WestLand reviewed a variety of regulatory and historical records to determine if any past uses of the property or within the adjoining areas may have led to recognized environmental conditions at the property.

# STANDARD ENVIRONMENTAL RECORD SOURCES

WestLand contracted with Environmental Data Resources, Inc. (EDR) of Southport, Connecticut to conduct an electronic search of regulatory agency databases for references to the property and surrounding lands within ASTM-recommended search distances. The database information provided by EDR is summarized below. A copy of the EDR environmental report that describes the databases searched, the search distances, and the dates the databases were last updated is provided in Appendix A.

Federal and state ASTM-required databases and supplemental databases were searched by EDR, as was one EDR proprietary database. The vast majority of the databases did not reference the property or surrounding properties; those databases with no mapped sites are listed in Table 1. Only two ASTM-required and one supplemental database identified surrounding properties; information regarding these listings is provided in the following paragraphs.

Table 1. Databases With No Mapped Sites				
Acronym	Full Title	Туре		
NPL	National Priority List	Federal ASTM Standard		
Proposed NPL	Proposed National Priority List Sites	Federal ASTM Standard		
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	Federal ASTM Standard		
CERC-NFRAP	CERCLIS No Further Remedial Action Planned	Federal ASTM Standard		
CORRACTS	Corrective Action Report	Federal ASTM Standard		
RCRIS-TSD	Resource Conservation and Recovery Information System Treatment, Storage and Disposal Facility	Federal ASTM Standard		
RCRIS-LQG	RCRIS Large Quantity Generator (of hazardous waste, over 1,000 kilograms per month)	Federal ASTM Standard		
RCRIS-SQG	RCRIS Small Quantity Generator (of hazardous waste, between 100 and 1,000 kilograms per month)	Federal ASTM Standard		
ERNS	Emergency Response Notification System	Federal ASTM		
SPL	Superfund Program List	State ASTM Standard		
SHWS	ZipAcids List	State ASTM Standard		
SWF/LF	Directory of Solid Waste Facilities	State ASTM Standard		
AZ WQARF	Water Quality Assurance Revolving Fund Sites	State ASTM Standard		
Indian UST	Underground Storage Tanks on Indian Land	State ASTM Standard		
CONSENT	Superfund (CERCLA) Consent Decrees	Federal ASTM Supplemental		
ROD	Records of Decision	Federal ASTM Supplemental		
Delisted NPL	NPL Deletions	Federal ASTM Supplemental		
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report	Federal ASTM Supplemental		
HMIRS	Hazardous Materials Information Reporting System	Federal ASTM Supplemental		

Table 1. Databases With No Mapped Sites				
Acronym	Full Title	Туре		
MLTS	Material Licensing Tracking System	Federal ASTM Supplemental		
NPL Liens	Federal Superfund Liens	Federal ASTM Supplemental		
PADS	PCB Activity Database System	Federal ASTM Supplemental		
DOD	Department of Defense Sites	Federal ASTM Supplemental		
RAATS	RCRA Administrative Action Tracking System	Federal ASTM Supplemental		
TRIS	Toxic Chemical Release Inventory System	Federal ASTM Supplemental		
TSCA	Toxic Substances Control Act	Federal ASTM Supplemental		
SSTS	Section 7 Tracking Systems	Federal ASTM Supplemental		
FTTS	FIFRA/TSCA Tracking System	Federal ASTM Supplemental		
AST	List of Aboveground Storage Tanks	State ASTM Supplemental		
AZ Spills	Hazardous Materials Logbook	State ASTM Supplemental		
AZ DOD	Department of Defense Sites	State ASTM Supplemental		
WWFAC	Waste Water Treatment Facilities	State ASTM Supplemental		
Aquifer	Waste Water Treatment Facilities	State ASTM Supplemental		
Dry Wells	Drywell Registration	State ASTM Supplemental		
AZ AIRS	Arizona AIRS Database	State ASTM Supplemental		
Coal Gas	Former Manufactured Gas (Coal Gas) Sites	EDR Proprietary		

The following paragraphs summarize the entries for the three electronic databases in which mapped sites *were* identified. Additionally, "orphan sites", for which inadequate location information was available to EDR to accurately map, are described.

# Arizona Underground Storage Tanks

The Arizona Underground Storage Tank (UST) – Data Management System (DMS) Facility Tank Data Listing is a state ASTM standard database. It is maintained by the Arizona Department of Environmental Quality (ADEQ) UST Compliance Unit and provides a comprehensive listing of all reported active and inactive underground storage tanks within the State of Arizona.

- The property is not listed in this database.
- Three UST sites are present within the ASTM-designated 1/8-mile search distance from the property:
  - (1) Creola Dungen, 15062 Highway 77, is listed as having two USTs, installed in 1968. No information regarding tank size, contents, or removal is provided, although the "In Use" query is identified as "false" suggesting that the tanks are no longer in use.
  - (2) Tosco Circle K #853, 307 Highway 77, is listed as having five USTs. Three were installed in 1973 and are similarly suggested to be no longer in use. It should be noted that this site is also listed in the Leaking UST (LUST) database, as described below, and three LUST cases were closed in 1998. Based on this entry, it is likely that the three USTs installed in 1973 were removed in or before 1998. Two additional USTs were

installed in 1995; no information regarding tank size or contents for these latter two USTs is provided.

(3) Town of Mammoth, 125 North Clark Street, is listed as having one UST, installed in 1967 and similarly suggested to be no longer in use. No information regarding tank size, contents, or removal is provided.

## Arizona Leaking Underground Storage Tank File Listing

The Arizona Leaking Underground Storage Tank (LUST) File Listing is a state ASTM standard database. It is maintained by the ADEQ UST Compliance Unit and is a comprehensive listing of all reported active and inactive LUSTs within the State of Arizona.

- The property is not listed in this database.
- As noted above, one LUST site was identified within the ASTM-designated <sup>1</sup>/<sub>2</sub>-mile search distance:
- (1) Tosco Circle K #853, 307 Highway 77, is listed as having three LUSTs. The database entry indicates that the ADEQ received notification for one LUST in 1988 and for the other two tanks in 1995. All three LUST cases were closed in 1998, and petroleum product concentrations in soils surrounding the LUSTs are identified as "meets Tier 1", a regulatory numeric limit on contamination allowing site closure without remediation or deed restriction of the property.

## **Mines Master Index File**

The Mines Master Index File is a federal ASTM supplemental database. It is maintained by the US Department of Labor, Mine Safety and Health Administration and is a listing of registered mine sites throughout the country.

- The property is not listed in this database.
- One mine site was identified within the searched area:
  - Metro Materials Globe, no address, is identified as a non-coal mining facility in Mammoth, Pinal County, Arizona. No environmental information regarding this facility is provided in the EDR report.

## **Orphan Sites**

The EDR Orphan Summary lists 55 sites that were unmappable due to inadequate location information. Based on WestLand's review of this list, all of the orphan sites are either distant from the property or are not sources of recognized environmental conditions potentially impacting the property.

# ADDITIONAL ENVIRONMENTAL RECORD SOURCES

## **Groundwater Quality**

The Arizona Department of Water Resources (ADWR) was contacted in reference to their Well Registry database. The database maintains records of all registered wells, including abandoned wells within the State of Arizona (Appendix B). The registry generally locates wells within 1/64 of a section.

ADWR database information received on June 23, 2003 listed 20 wells within the property (Table 2). An additional 30 wells were listed with inadequate information to precisely determine a location; however, any of these wells may be located within property boundaries (Table 3). Well depths on the property range from 16 to 108 feet below ground surface and reported water levels range from 8 to 62 feet below ground surface. Well depths in the surrounding areas or in areas not confirmed to be within the property boundaries range up to depths of 400 feet below ground surface with reported water levels up to 350 feet below ground surface.

	Table 2. ADWR Registered Wells confirmed within Property Boundaries				
Well #	Location	Owner	Well Depth	Water Level	Water Use
624642	Township 8 South, Range 16 East, Section 12 DAA	BHP Copper Inc.	40	17	Stock
588812	Township 8 South, Range 17 East, Section 7 CDD	United Metro Materials, Inc.			Industrial
588813	Township 8 South, Range 17 East, Section 7 CDD	United Metro Materials, Inc.			Industrial
588814	Township 8 South, Range 17 East, Section 7 CDD	United Metro Materials, Inc.			Industrial
624641	Township 8 South, Range 16 East, Section 12 CDD	BHP Copper Inc.	75	22	Domestic Stock
624629	Township 8 South, Range 17 East, Section 7 DCB	BHP Copper Inc.	58	38	Domestic Stock
624630	Township 8 South, Range 17 East, Section 7 DCB	BHP Copper Inc.	58	25	Domestic Stock
400058	Township 8 South, Range 17 East, Section 17 CAA	Mercer Richard Dell			None
572562	Township 8 South, Range 17 East, Section 17 CAA	Mercer Richard Dell	100	62	Domestic
649742	Township 8 South, Range 17 East, Section 17 CDD	Weddle Thomas B.	80	58	Domestic

	Table 2. ADWR Registered Wells confirmed within Property Boundaries				
Well #	Location	Owner	Well Depth	Water Level	Water Use
627691	Township 8 South, Range 17 East, Section 17 DCA	Clark, B	86	0	Domestic
627681	Township 8 South, Range 17 East, Section 17 DCD	Clark, B	98	35	Irrigation
536332	Township 8 South, Range 17 East, Section 18 AAB	Guerrero, Alfred, L	108	40	Irrigation
624623	Township 8 South, Range 17 East, Section 19 DAA	BHP Copper Inc.	160	10	Industrial
896318	Township 8 South, Range 17 East, Section 19 DAA	Town of Mammoth	125	15	Industrial
643806	Township 8 South, Range 17 East, Section 20 DB	Newmont	100	0	Domestic
624643	Township 8 South, Range 17 East, Section 29 ACA	BHP Copper Inc.	0	12	Domestic Stock
624625	Township 8 South, Range 17 East, Section 29 DDA	BHP Copper Inc.	100	17	Irrigation
624632	Township 8 South, Range 17 East, Section 32 ADD	BHP Copper Inc.	1485	1	Stock
624636	Township 9 South, Range 17 East, Section 04 CDA	BHP Copper Inc.	16	8	Stock

#### Table 3. ADWR Registered Wells Non-Specific Location Information; Potentially on Property

Well #	Location	Owner	Well Depth	Water Level	Water Use
611179	Township 8 South, Range 17 East, Section 7 BB	Miller, C R	110	40	Irrigation Domestic Stock
644510	Township 8 South, Range 17 East, Section 17	Peters, F E	70	50	Domestic
646322	Township 8 South, Range 17 East, Section 7	Sanchez, Martin, S	81	40	Domestic
538204	Township 8 South, Range 17 East, Section 18	El Paso Natural Gas	40	7	None
642864	Township 8 South, Range 17 East, Section 18	Yanez, A C	120	67	Domestic

Well #	Location	Owner	Well Depth	Water Level	Water Use
646773	Township 8 South, Range 17 East, Section 18	Altamirano, F G	100	0	Domestic
649206	Township 8 South, Range 17 East, Section 18	Juvera, A G	75	50	Domestic
802693	Township 8 South, Range 17 East, Section 18	Moreno, P L	103	0	Domestic
637858	Township 8 South, Range 17 East, Section 18 B	Thrasher, S E	40	20	Domestic
637142	Township 8 South, Range 17 East, Section 19	Marcum, J H	147	78	Domestic
643379	Township 8 South, Range 17 East, Section 19	Chavez, I	100	30	Domestic
646323	Township 8 South, Range 17 East, Section 19	Verdugo, F J	45	0	Domestic
646945	Township 8 South, Range 17 East, Section 19	Waskosr, D D	90	40	
646946	Township 8 South, Range 17 East, Section 19	Waskosr, D D	250	170	Domestic
646947	Township 8 South, Range 17 East, Section 19	Waskosr, D D	140	90	
649201	Township 8 South, Range 17 East, Section 19	Chavez Tommy & Leah	150	0	Domestic
649369	Township 8 South, Range 17 East, Section 19	Baugher, S E	330	0	Irrigation Domestic
650443	Township 8 South, Range 17 East, Section 19	Starling, P W	0	0	
650663	Township 8 South, Range 17 East, Section 19	Verdugo, R F	160	60	Domestic
650664	Township 8 South, Range 17 East, Section 19	Verdugo, R F	70	60	Domestic
647076	Township 8 South, Range 17 East, Section 19 AD	Burney, L D	120	30	Domestic
646759	Township 8 South, Range 17 East, Section 19 DA	Peterson, L M	190	100	Domestic

Table	Table 3. ADWR Registered Wells Non-Specific Location Information; Potentially on Property				
Well #	Location	Owner	Well Depth	Water Level	Water Use
646761	Township 8 South, Range 17 East, Section 19 DA	Oliver, C M	163	75	Domestic
646764	Township 8 South, Range 17 East, Section 19 DA	Gorham, M P	190	60	Domestic
650435	Township 8 South, Range 17 East, Section 19 DA	Weaber, J	0	0	Irrigation
086532	Township 8 South, Range 17 East, Section 19 DAD	AZ Public Service	0	0	Utility
648278	Township 8 South, Range 17 East, Section 19 DAD	Yandell, W	0	0	Domestic
643049	Township 8 South, Range 17 East, Section 33	Franco, Robert Jr.,	100	46	Domestic
649698	Township 8 South, Range 17 East, Section 33	Tudor, Roy, L	93	50	Domestic
805109	Township 8 South, Range 17 East, Section 33	Mikels, Issac, M	120	25	Irrigation Domestic Stock
600287	Township 8 South, Range 17 East, Section 33 AC	Walker, C G	63	37	Domestic

The groundwater resources in the lower San Pedro River are found in four principal water-bearing units: the floodplain aquifer, the unconfined basin-fill aquifer, the confined (or artesian) basin-fill aquifer, and in the fractured and faulted portions of hardrock mountains of the basin. The most productive water-bearing unit is the floodplain aquifer, which parallels the major waterways. Although the aquifer reference for each well is not provided by ADWR, it may be assumed that well depths to 50 feet are tapped into the floodplain aquifer. Furthermore, the confirmed (artesian) basin fill aquifer may be encountered in wells drilled deeper than 500 feet in or near the middle section of the San Pedro River's floodplain near Mammoth. Groundwater readily moves from the unconfined basin-fill aquifer to the floodplain aquifer. These water table aquifers, especially the floodplain aquifer may also receive water leaking upwards from the artesian aquifer in the Mammoth area.

To characterize regional groundwater quality in the Lower San Pedro River basin, the ADEQ Ambient Groundwater Monitoring Program sampled 63 sites (27 in the floodplain aquifer, 9 in the unconfined basin-fill aquifer, and 4 in the artesian aquifer). Of the 63 sites, 11 had constituent concentrations exceeding health-based water quality standards and 31 sites exceeding aesthetics-based water quality guidelines (Towne, 2002). In general, the regional groundwater is slightly alkaline (pH >7 standard

units), fresh (Total Dissolved Solids [TDS] less than 1,000 milligrams per liter) and varies widely in hardness and chemical composition.

Test samples for the detection of Volatile Organic Compounds (VOC) were taken at 25 sites throughout the basin and detections were revealed at only two sites. Chloroform was collected from a public water supply well near Kearny (about 25 miles north of the property), and methylethyl ketone and an unidentified compound occurred in a sample from a well located in the floodplain south of Mammoth. These latter detections were thought to have been caused by glue used for polyvinyl chloride (PVC) piping and the well owner had repaired the wellhead the day before ADEQ sampling. In addition to sampling for VOCs, two samples tested for the presence of pesticides or their products of degradation were negative. Nutrient concentrations were generally low and most trace elements were rarely detected.

These data may suggest minimal impacts to groundwater from human activities in the lower San Pedro River basin. No independent verification of water quality was performed as part of this Phase I ESA.

# Environmental Protection Agency (EPA) Facility Registry System (FRS)

Although not within the ASTM designated search distances (i.e., over one mile from the site), the BHP Copper San Manuel Operations should be noted as a large industrial facility. The San Manuel Copper mine plant (including former milling, smelting, and solvent extraction/electrowinning), located approximately 10 miles south of the property in the nearby town of San Manuel, ceased processing copper ore in 1999. The mine plant site is currently undergoing demolition, reclamation, and closure and still represents the potential for environmental affects to the region.

The San Manuel Mine operations maintain numerous environmental identification classifications through the EPA, including a Resource Conservation and Recovery Act (RCRA) large-quantity hazardous waste generator. Several landfill operations are associated with the mine and plant site, and tailings piles in the area provide the potential for contamination of groundwater. Even though evidence for groundwater contamination in the lower San Pedro River valley has not been detected, similar types of facilities are known to have contributed sulfates or other pollutants to groundwater.

## **Prior Environmental Reports**

ASTM E 1527 Section 5 User Responsibilities describes tasks that will help identify the possibility of recognized environmental conditions in connection with the property that do not require the expertise of an environmental professional. These tasks include checking title records for environmental liens and providing prior environmental reports, if available. WestLand coordinated with the owner representative to determine if prior environmental information was available for the property; none was provided.

# **PHYSICAL SETTING**

Geologically, the property is located within the Basin and Range Physiographic Province. Elevation of the property ranges from approximately 2,600 feet above mean sea level (amsl) atop a bluff at the southwestern most corner of the property sloping gradually towards 2,300 amsl at the northern boundary. The lowest elevations occur at the thalweg of the San Pedro River at the northwest extreme of the property. The second highest elevation is located atop a bluff along the midpoint of the northeast margin of the property (approximately 2,525 feet amsl). The San Pedro River streambed slopes gently to the northwest, and the primary stream channel meanders along the riverbed. No significant elevation drops within the streambed were observed. The overbanks locally slope toward the river, and are generally about 10 feet above the streambed. The upland bluffs range up to 50 or 75 feet in elevation above the overbanks; typically, the bluff slopes facing the river are steep to near vertical especially on the north side of the river. Upland slopes to the river are generally gentler on the south side of the river. On both sides, however, the bluffs are deeply incised by numerous washes, both named and unnamed. These washes flow across the overbanks in less-deeply incised but still well-defined channels. Surface geology of the entire area is alluvial material, either loose or lightly to heavily cemented. No bedrock outcrops were observed.

Biologically, the upland portion of the property is located within the Arizona Upland Subdivision of the Sonoran Desertscrub biotic community (Brown, 1994). Characteristic species of the palo verde-cactimixed scrub series of this subdivision present on the property include Foothill Palo Verde (*Cercidium* microphyllum), ironwood (*Olneya tesota*), and saguaro (*Carnegia gigantean*). The overbanks and streambed portion of the property include Sonoran Riparian Deciduous Forest and Woodlands biotic community plants. In particular, mesquite (*Prosopis velutina*) "bosques" (Spanish for woodlands) dominate the overbanks. Brown (1994) states that the bosques "attain their maximum development on alluvium of old dissected flood plains" such as those present on overbanks adjacent to the main channel of the San Pedro River within the property.

Surrounding lands display the same physical characteristics, with upland areas gradually transitioning to mountain ranges northeast and southwest of the property, and the river bottomland similarly extending southeast and northwest. The San Pedro River terminates at the Gila River some 18 miles northwest of the property. Nearby developments include the small towns of Mammoth and North Mammoth, adjoining the property near the midpoint of the southwestern side, and undeveloped land of the San Manuel Mine Plant site, adjoining the property along the southeastern extreme.

## HISTORICAL USE INFORMATION ON THE PROPERTY

# **USGS** Topographic Maps

Four USGS 7.5-minute quadrangle maps cover the property area and were reviewed for this report. These maps include Lookout Mountain, Holy Joe Peak, Mammoth, and Clark Ranch, Arizona quadrangles.

These maps were originally developed in 1948 or 1949, then photorevised in 1972. These quadrangles generally depict the property as rural undeveloped land with scattered developments throughout the area and indicate primarily residential-type land uses. The southern portion of the Town of Mammoth, all of the Town of North Mammoth, and the nearby wastewater treatment facility are all indicated as part of the 1972 photorevision. In addition, State Highway 77 and San Manual Plant site tailings impoundments are also indicated as 1972 details. River Road, on the east side of the San Pedro River is present as an improvement on the 1948 details. However, the road is broken in several areas near the junction of a large watershed from the east; with the 1972 photorevision these breaks in the road are bridged or otherwise improved. The 1948 improvements depict scattered structures (presumed to be residences), the northern portion of the Town of Mammoth (generally north of Copper Creek Road) various "wells" and "tanks", and rural unpaved roads. Copper Creek Road is present east of the San Pedro River as a detail of the 1948 map with extension to the west as part of the 1972 photorevision. In general, the topographic maps describe a level of development consistent with the present-day conditions consisting of a predominantly rural community with the small town of Mammoth serving as the central source for commerce in the area.

#### **Historical Aerial Photographs**

Historical aerial photographs dated 1979, 1987, and 1993, provided by Cooper Aerial Surveys Company, were reviewed for the property and adjoining areas. The 1979 aerial photographs (scale 1'' = 8400') generally depict the area to be undeveloped land, unpaved rural roads, and scattered residential developments outside of the towns of Mammoth and North Mammoth. Highway 77 and River Road are the two main thoroughfares through the area. Copper Creek Road leads northeast from the Town of Mammoth through the San Pedro River bed (under water at the time of the photograph) into the uplands on the east side of the site. The wastewater treatment facility for North Mammoth is present at the southwest corner of the San Pedro River and Highway 77, near the northernmost area of the property; however the configuration of the ponds is not the same as they are currently. A mining quarry is present adjoining the property to the east of River Road south of the River Road and Highway 77 junction. Various areas of mesquite bosque are cleared of vegetation throughout the property. Much of the cleared areas appear to be distinctly for the purpose of agriculture, however, several smaller areas are also cleared and the configuration for clearing does not provide obvious purpose (these areas are immediately north and south of Copper Creek Road, as well as other locations scattered throughout the property). The 7B Ranch location is present at the eastern edge of a large irregular shaped agricultural area near the southern portion of the property. Several structures and miscellaneous items are present throughout the area and a network of unpaved farm roads is present from the ranch site to the south through the dense bosque. A small area of vegetation is cleared at the Patton Ranch location (south of the Hwy 77 and River Road junction), however corrals or other use indicators are not visible. At the southwest corner of Copper Creek Road and River Road, an unpaved rural road is present leading to a small area of activity, presumed to be a homestead. Distinct structures or identifiable items are not visible.

The 1987 aerial photographs (scale 1" = 42,000') provide a more regional overview of the property in relationship to farther adjoining areas. Based upon this aerial, approximately 15 percent of the property was cleared for agricultural use and the remainder was left undeveloped mesquite bosque surrounding a modest community infrastructure that lies along the San Pedro River Valley. The topography to the east and west is convoluted and several large and small tributaries flow into the river. Outlying residential areas exist along Highway 77 and River Road to the south of the property. As in the 1979 photographs, small areas of vegetation are cleared throughout the property. The wastewater treatment facility near the northwestern portion of the property has been upgraded to include eight ponds. However, the towns of Mammoth and North Mammoth appear generally unchanged.

The 1993 aerial photographs (scale  $1^{"} = 12,000^{"}$ ) are generally indicative of the current property conditions. The property continues to be predominantly comprised of vacant undeveloped mesquite bosque with scattered areas of residential development throughout the area. The adjoining areas are developed with the towns of Mammoth and North Mammoth and various residential neighborhoods. The mining quarry remains present adjoining the property. At the Patton Ranch location, small structures and smaller unknown items are visible scattered throughout the area. The small area of residential development persists to the southwest of River Road and Copper Creek Road. Similarly the site appears to be a homestead with various smaller items or support structures scattered around the area. The 7B Ranch site remains present in the 1993 aerial, generally unchanged. A slightly larger area of vegetation is cleared for agriculture.

In general, the agricultural areas throughout the property appear to have been quickly reclaimed with vegetation. Many of the areas that are clear of vegetation and visibly distinct in the prior aerial photographs are barely detectable in the 1993 photographs and were not detected during the onsite reconnaissance. During the onsite reconnaissance, much less area appeared to have been cleared for agricultural use than is depicted in the historical aerials. Based upon comparison of these aerials, the rate at which cleared areas are overgrown and undetectable is presumed to be less than 10 years. Review of these historical aerials did not provide evidence of recognized environmental conditions at the property.

# HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Historical use information on adjoining properties was similarly derived from USGS Quadrangle maps and historical aerial photography as described in the previous section. Adjoining areas have included primarily residential and rural commercial development in the Town of Mammoth. Farther adjoining areas are increasingly rural and less developed.

# SITE RECONNAISSANCE

On June 12, 2003, WestLand environmental specialists Christopher Rife and Katie Owles performed a visual site reconnaissance to assess existing environmental conditions on the property. Mr. Rife conducted a return visit on June 16, 2003. Photographs documenting pertinent site features are provided in Appendix D.

## METHODOLOGY AND LIMITING CONDITIONS

The site reconnaissance was conducted with both vehicular and pedestrian survey. Areas of known concentrated human activity (the Patton and 7B Ranch sites) were assessed in more detail than other areas because these areas present the greatest potential to have been impacted by hazardous materials.

WestLand's reconnaissance was limited to BHP Billiton-owned property accessible with permission of BHP Billiton and areas reached through publicly accessible detours from public roads. In all instances practicable, WestLand took the opportunity to visually inspect off-road areas throughout the property.

Due to the large amount of undeveloped land throughout the property, "spot-check" methodology was used to investigate the dense mesquite bosque of the San Pedro River Valley. Most likely, instances for wildcat dumping are thought to occur at reasonably accessible locations; hence the inspection of rural unpaved roads. Due to the size of the property and obscurity presented by heavy vegetation in the bosques, it should not be assumed that all instances of wildcat dumping were observed during the onsite reconnaissance or noted herein.

The site reconnaissance was limited to visual inspection of above ground evidence that may suggest the presence or likely presence of recognized environmental conditions to have impacted the property. The onsite reconnaissance does *not* provide information regarding potential sources of contamination below ground surface. However, in cases of subsurface contamination, above ground indicators such as obvious stress to plant life would be noted.

# **GENERAL SITE SETTING**

The property reach extends approximately seven miles along the San Pedro River, upstream and downstream of the Town of Mammoth, Arizona. The property boundaries generally follow section lines (or fractions thereof) irregularly following the course of the river along adjoining rural residential development, and the towns of Mammoth and North Mammoth.

# **EXTERIOR OBSERVATIONS**

## Hazardous Substances in Connection with Identified Uses

No portion of the property is currently used for any organized human activity. Historically, a portion of the property in Section 20 of Township 8 South, Range 17 East was used as a cattle ranch, and a few 55-gallon drums and smaller (e.g., 5-gallon) containers of agricultural chemicals (pesticides, herbicides, or fertilizers) or petroleum products (oil and grease) remain in this area.

## Hazardous Substance Containers and Unidentified Substance Containers

Because of the nature of this property, potential sources for hazardous substance containers or unidentified substance containers to be present on a permanent basis are limited. As noted above, a small number of such containers are present on the property at the former ranch location.

Hazardous substances such as pesticides, herbicides, and fertilizers were likely used as part of normal ranching operations, and petroleum products such as oil and grease were likely used as part of normal maintenance. It is further possible that oil may have been used for dust control, but specific evidence of this practice was not observed by WestLand during the field reconnaissance. However, small areas (a few tens of square feet) of stained soils were apparent in some locations near petroleum product drums.

Furthermore, numerous 55-gallon drums are present scattered throughout the property; these appear to be the result of wildcat dumping but were generally observed to contain inert materials or were empty. In no case were hazardous substances or wastes observed in any of the containers randomly placed on the property.

Other than the roads and agricultural clearing noted above, evidence of human activity on the property is limited to an abandoned ranch (approximately 10 structures in generally poor condition, a mobile home, agricultural equipment, corrals, and several abandoned vehicles), a second corral location, and numerous wildcat dumping locations (generally, household waste and wrecked cars) throughout the property. A few pole-mounted electrical transformers are present at the ranch and corral locations.

## Storage Tanks

Various commercial and industrial services require the use of both underground and aboveground storage tanks to store a variety of hazardous substances and/or petroleum products and enable them to carry out routine services. The most common types of tanks include above ground liquid propane tanks and underground storage tanks for gasoline and diesel fuels. Often, vent pipes are a reliable indication for the presence of underground storage tanks in the vicinity.

No storage tanks or evidence thereof were observed on the property.

#### **PCB Equipment**

Concern over the toxicity and persistence in the environment of polychlorinated biphenyls (PCBs) led Congress in 1976 to enact §6(e) of the Toxic Substances Control Act (TSCA) that included prohibitions on the manufacture, processing, and distribution in commerce of PCBs. Thus, TSCA legislated true "cradle to grave" (i.e., from manufacture to disposal) management of PCBs in the United States. Electrical transformers provide the most likely potential for release of PCBs onto the property.

Several pole-mounted transformers were observed within the right-of-way and immediately adjoining the property in association with adjoining developments. Very minor staining was observed around the base of some of the pole-mounted transformers; in no cases was there evidence of soil staining beneath these transformers. No information regarding PCB content of cooling oils in the transformers was provided by the property owner.

## Solid Waste Disposal

The RCRA was enacted by Congress in 1976 and amended in 1984. The Act's primary goal is to protect human health and the environment from the potential hazards of waste disposal. Unauthorized solid waste disposal provides the potential for hazardous and regulated substances to impact a project area in the absence of generating activities.

Significant "wildcat" solid waste dumping was observed on the property. More concentrated waste disposal of inert materials was observed near the former ranch site. Evidence of liquid or hazardous waste disposal was not observed. No permitted landfills were observed or are known to be present on the property.

## Water Retention Basins

Water retention/detention basins present the potential for contaminated or petroleum-laden storm water runoff to be contained within a property. No water retention basins were observed on the property. It should be noted that stock tanks are depicted on the Clark Ranch, Arizona USGS 7.5-minute quadrangle. The stock tank was not observed during the reconnaissance. If present, the tank likely consists of either an earthen berm or shallow metal-walled basin fed by a well, and is likely not subject to contamination from storm water runoff.

## **Distressed Vegetation**

No evidence of distressed vegetation was observed during the onsite reconnaissance. In addition to the site reconnaissance for this Phase I ESA, WestLand Biologist Mike Cross also conducted field reconnaissance of the habitat throughout the property on June 12, 2003. Mr. Cross traversed the interior of the property primarily by foot along the San Pedro Riverbed. Although Mr. Cross' assignment did not

specifically include observations of distressed vegetation in association with potentially hazardous materials, he did not observe unusually distressed vegetation during his assessment.

# **INTERVIEWS**

#### INTERVIEW WITH SITE MANAGER

During the onsite reconnaissance, WestLand met with Gerry Brunskill, the owner representative for BHP Billiton. Mr. Brunskill provided an orientation of the property and gate access to the onsite Patton Ranch and 7B Ranch locations. Historical knowledge provided about the property was limited to general historical use information. Mr. Brunskill stated that the only known development within the property is limited to these ranch locations. Historical uses included agriculture and ranching, and included groundwater pumping for domestic water supply, irrigation, and stock watering purposes. No known mine operations were conducted within the property boundaries.

#### INTERVIEWS WITH OCCUPANTS

The property is currently unoccupied.

# FINDINGS

Based upon findings of the historical and local records review, the ASTM environmental records search, and the onsite property reconnaissance, WestLand has identified the following findings pertaining to the property.

- No ASTM listed sites were identified on the property.
- Three UST sites were listed within the ASTM designated <sup>1</sup>/<sub>2</sub>-mile search distance.
- One LUST case was listed within the ASTM designated 1-mile search distance.
- The Metro Materials Globe mine site was identified within the Federal ASTM supplemental search distance.
- The San Manuel Mine plant site is located approximately 10 miles south of the property.

# OPINION

No recognized environmental conditions were observed on the property. A few full or partially full, labeled or unlabeled drums and containers are present at the former 7B Ranch site. Contents likely range from grease and other petroleum products to pesticides, herbicides, and fertilizers used in agricultural activities. Most drums were not observed to be leaking; some staining in the vicinity of other containers appeared to be petroleum-based products. The physical area of staining was observed to be limited to a few tens of square feet. The wildcat dumping sites and abandoned vehicles likely present more of a housekeeping issue rather than environmental liability. Although widely dispersed throughout the property and relatively voluminous (due to the presence of numerous cars), the dumping does not appear to have included any hazardous materials (other than petroleum products and other chemicals associated with automobiles). In short, cleanup of the property would likely consist of collection and disposal of the miscellaneous waste materials, cars, and equipment; proper disposal of the agricultural chemicals; and excavation and disposal of a relatively small amount of petroleum-contaminated soil.

The San Manuel Mine plant site and associated tailings piles provide source for potential contamination to groundwater in the region. Even though direct evidence for groundwater contamination has not been documented by ADEQ or ADWR, it should be noted that the potential for groundwater contamination persists. Although specific information identifying environmental impacts from this source was not found in this study, a potential for such impacts (especially to groundwater) exists. This situation does not present a recognized environmental condition for the property, but should be documented for future reference.

# CONCLUSION

WestLand performed a Phase I ESA of a 3,500-acre property near Mammoth, Arizona in conformance with the scope and limitations of ASTM Practice E 1527-00. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report.

Based upon the experience of the environmental professionals involved in the preparation of this report, no evidence was observed or identified through the process as defined by ASTM Standard Practice E 1527 to suggest the presence or likely presence of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products on the ground, groundwater, or surface water of the property. This assessment has revealed no evidence of recognized environmental conditions in connection with the property. As described above, soil staining observed at the former ranch site is considered to be a *de minimis* issue, not posing a threat to human health or the environment. Regardless, we recommend the cleanup of the property as a housekeeping issue. Furthermore, extensive historical mining and processing activities have occurred upgradient and upstream of the property.

# REFERENCES

Towne, D.C., 2002. Ambient Groundwater Quality of the Lower San Pedro River Basin: A 2000 Baseline Study. ADEQ OFR 02.01: Phoenix, Arizona.

Arizona Department of Commerce; Mammoth Community Profile.

Arizona Department of Water Resources; Lower San Pedro Basin. www.adwr.state.az.us

West USA Realty, Arizona. www.arizonan.com/Mammoth/

Mammoth Arizona Resource Guide, City of community of Mammoth, Arizona Facts. <u>www.pe.net/~rksnow/azcountymammoth.html</u>

History and information about Mammoth, Arizona. http://jeff.scott.tripod.com/mammoth.html

Cooper Aerial Surveys Company. Historical Aerials dated 1979, 1987, and 1993.

Environmental Data Resources, Inc. *San Pedro River Phase I ESA, Mammoth, AZ 85618.* June 17, 2003. Inquiry number 0995848.1s.

#### SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Katie M. Owles, Environmental Specialist

Christopher Rife, Project Manager

Date

Date

# QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Ms. Katie Owles and Mr. Christopher Rife performed this ESA. These individuals possess sufficient education, training, and experience to qualify as environmental professionals under ASTM Practice E 1527, and have the ability to develop conclusions regarding *recognized environmental conditions*, if any, concerning the *property*. Resumes for the key individuals participating on this project and a Statement of Qualifications for WestLand are available upon request.

# **APPENDIX A**

# EDR

ENVIRONMENTAL REPORT



# The EDR Area Study Report

Study Area San Pedro River Phase I ESA Mammoth, AZ 85618

June 17, 2003

Inquiry number 0995848.1s

# *The* Source For Environmental Risk Management Data

3530 Post Road Southport, Connecticut 06890

**Nationwide Customer Service** 

 Telephone:
 1-800-352-0050

 Fax:
 1-800-231-6802

 Internet:
 www.edrnet.com

# **EXECUTIVE SUMMARY**

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR).

#### TARGET PROPERTY INFORMATION

#### ADDRESS

SAN PEDRO RIVER PHASE I ESA MAMMOTH, AZ 85618

#### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable") government records within the requested search area for the following databases:

#### FEDERAL ASTM STANDARD

NPL	_ National Priority List
Proposed NPL	Proposed National Priority List Sites
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information
	System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	. Corrective Action Report
RCRIS-TSD	Resource Conservation and Recovery Information System
RCRIS-LQG	Resource Conservation and Recovery Information System
RCRIS-SQG	Resource Conservation and Recovery Information System
ERNS	Emergency Response Notification System

#### STATE ASTM STANDARD

SPL	_ Superfund Program List
SHWS	ZipAcids List
SWF/LF	Directory of Solid Waste Facilities
AZ WQARF	Water Quality Assurance Revolving Fund Sites
	Underground Storage Tanks on Indian Land

#### FEDERAL ASTM SUPPLEMENTAL

CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
Delisted NPL	National Priority List Deletions
FINDS	. Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS	Hazardous Materials Information Reporting System
MLTS	Material Licensing Tracking System
NPL Liens	Federal Superfund Liens
PADS	PCB Activity Database System
DOD	Department of Defense Sites

### **EXECUTIVE SUMMARY**

RAATS	. RCRA Administrative Action Tracking System
TRIS	_ Toxic Chemical Release Inventory System
TSCA	
SSTS	. Section 7 Tracking Systems
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, &
	Rodenticide Act)/TSCA (Toxic Substances Control Act)

#### STATE OR LOCAL ASTM SUPPLEMENTAL

AST	List of Aboveground Storage Tanks
AZ Spills	
	Department of Defense Sites
	Waste Water Treatment Facilities
Aquifer	Waste Water Treatment Facilities
Dry Wells	Drywell Registration
AŹ AIRS	

#### EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas\_\_\_\_\_ Former Manufactured Gas (Coal Gas) Sites

#### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in *bold italics* are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

#### STATE ASTM STANDARD

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's LUST File Listing by Zip Code.

A review of the LUST list, as provided by EDR, and dated 02/14/2003 has revealed that there is 1 LUST site within the searched area.

Site	Address	Map ID	Page
TOSCO CIRCLE K # 853	307 HWY 77	2	3

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Arizona UST-DMS Facility and Tank Data Listing by City database.

A review of the UST list, as provided by EDR, and dated 02/14/2003 has revealed that there are 3 UST

### **EXECUTIVE SUMMARY**

sites within the searched area.

Site	Address	Map ID	Page
CREOLA DUNGEN	15062 HWY 77	1	3
TOSCO CIRCLE K # 853	307 HWY 77	2	3
TOWN OF MAMMOTH	125 N CLARK ST	3	4

#### FEDERAL ASTM SUPPLEMENTAL

**Mines:** Mines Master Index File. The source of this database is the Dept. of Labor, Mine Safety and Health Administration.

A review of the MINES list, as provided by EDR, and dated 03/11/2003 has revealed that there is 1 MINES site within the searched area.

Site	Address	Map ID	Page
METRO MATERIALS GLOBE		4	4

### **EXECUTIVE SUMMARY**

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

#### MAP FINDINGS SUMMARY

	Database	Total Plotted
FEDERAL ASTM STANDAR		
	NPL Proposed NPL CERCLIS CERC-NFRAP CORRACTS RCRIS-TSD RCRIS Lg. Quan. Gen. RCRIS Sm. Quan. Gen. ERNS	0 0 0 0 0 0 0 0 0
STATE ASTM STANDARD		
	SPL State Haz. Waste State Landfill LUST UST AZ WQARF INDIAN UST	0 0 1 3 0 0
FEDERAL ASTM SUPPLEN	IENTAL	
STATE OR LOCAL ASTM S	CONSENT ROD Delisted NPL FINDS HMIRS MLTS MINES NPL Liens PADS DOD RAATS TRIS TSCA SSTS FTTS	0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
STATE OR LOCAL ASTM S	UPPLEMENTAL	
	AST AZ Spills AZ DOD WWFAC Aquifer Dry Wells	0 0 0 0 0 0

#### MAP FINDINGS SUMMARY

Database	Total Plotted
AZ AIRS	0
EDR PROPRIETARY HISTORICAL DATABASES	
Coal Gas	0

NOTES:

Sites may be listed in more than one database

1

2

Date Closed:

11

EDR ID Number

Database(s)

s) EPA ID Number

#### Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

**CREOLA DUNGEN** UST U001628173 15062 HWY 77 N/A **MAMMOTH, AZ 85618** UST: 0-006770 Tank ID: Facility ID: 1 In Use: False Date Installed: 01/01/1968 Date Closed: 11 False In Use: Facility ID: 0-006770 Tank ID: 2 In Use: False Date Installed: 01/01/1968 Date Closed: 11 In Use: False TOSCO CIRCLE K # 853 LUST U003091248 307 HWY 77 UST N/A **MAMMOTH, AZ 85618** LUST: Facility ID: 0-001335 Lust Number: 0581.01 Leak Priority: CLOSED SOIL LVL MEETS TIER1 Notification: 11/10/1988 Date Closed: 04/08/1998 0-001335 Facility ID: Lust Number: 0581.02 CLOSED SOIL LVL MEETS TIER1 Leak Priority: Notification: 11/28/1995 Date Closed: 04/08/1998 Facility ID: 0-001335 Lust Number: 0581.03 CLOSED SOIL LVL MEETS TIER1 Leak Priority: Notification: 11/28/1995 Date Closed: 04/08/1998 UST: Facility ID: 0-001335 Tank ID: 1 In Use: False Date Installed: 04/25/1973 Date Closed: 11 In Use: False Facility ID: 0-001335 Tank ID: 2 In Use: False Date Installed: 04/25/1973 Date Closed: 11 In Use: False Facility ID: 0-001335 Tank ID: 3 In Use: False Date Installed: 04/25/1973

Map ID			MAP FINDING	3			
Direction							EDR ID Number
Distance Distance (ft	.)Site				<u>[</u>	Database(s)	EPA ID Number
	TOSCO CIRCLE K # 8	353 (Continued)					U003091248
	In Use:	False					
	Facility ID: In Use: Date Installed: Date Closed: In Use:	0-001335 True 11/28/1995 / / True		Tank ID:	4		
	Facility ID: In Use: Date Installed: Date Closed: In Use:	0-001335 True 11/28/1995 / / True		Tank ID:	5		
3	TOWN OF MAMMOTH 125 N CLARK ST MAMMOTH, AZ 85613					UST	U003091376 N/A
	UST: Facility ID: In Use: Date Installed: Date Closed: In Use:	0-005920 False 11/20/1967 / / False		Tank ID:	1		
4	METRO MATERIALS	GLOBE				MINES	M100003733 N/A
	PINAL (County), AZ						
	U.S. MINES: Mine ID: Entity Name: State FIPS code: Status Date: Operation Class: Number of Pits: Latitude:	12/15/1989		SIC Codes: Company: County FIPS code: Status: Number of Shops: Number of Plants: Longitude:	METRO M 007 Full-time p 8	ATERIALS G	000 00000 00000 LOBE

**ORPHAN SUMMARY** 

City	EDR ID	Site Name	Site Address	Zip	Database(s)
МАММОТН	S105752125	MAMMOTH, TOWN OF - WWTP	14610 HIGHWAY 77	85618	WWFAC
MAMMOTH	U001000049	SAN CARLOS PROJECT	HWY 77	85618	LUST, UST
MAMMOTH	U003153825	MAMMOTH RANCH MARKET	706 HWY 77	85618	UST
MAMMOTH	S100240865	MAMMOTH LANDFILL	0.9 MI N OF SAN PEDRO BRIDGE ON E S	85618	SWF/LF
MAMMOTH	S105742754	MAMMOTH AUTO & SVC INC	726 N OLD HWY 77	85618	LUST
ORACLE	1000893590	ORACLE RIDGE MINE	22M SOUTH-SOUTHEAST	85631	CERCLIS, SHWS, FINDS
PINAL COUNTY	S103895029	ADAMSVILLE	12370 E. 287-ALONG HIGHWAY 287 2 MILES WEST OF FLO		SWF/LF
PINAL COUNTY	S103895034	SAN MANUEL MINE SITE GARBAGE DUMP	HIGHWAY 76 1 MILE WEST OF HIGHWAY 77		SWF/LF
PINAL COUNTY	S103895035	SAN MANUEL PLANTSITE	HIGHWAY 76 EAST OF SAN MANUEL		SWF/LF
PINAL COUNTY	S103895036	SAN MANUEL/MAIN SITE WOOD DUMP	HIGHWAY 76 1 MILE WEST OF HIGHWAY 77		SWF/LF
PINAL COUNTY	S103895037	SAN MANUEL/PLANTSITE	HIGHWAY 76 EAST OF SAN MANUEL TOWNSIT		SWF/LF
PINAL COUNTY	S103895038	SAN MANUEL/PLANTSITE WOOD DUMP	HIGHWAY 76 EAST OF THE TOWN OF SAN MANUEL		SWF/LF
PINAL COUNTY	S103895208	COLLINAS TIRE RECOVERY INC.	HWY 87 S.8 MILES TO COOLIDGE W.ON 5TH ST.1/3 MILE		SWF/LF
PINAL COUNTY	S103277419	CITY OF ELOY	NORTHEAST CORNER OF TOLTEC RD / ALSDORF RD.2 MIL		SWF/LF
PINAL COUNTY	S103278441	STANFIELD	1.2 MILES W OF MARICOPA RD. ON AZ 84		SWF/LF
PINAL COUNTY	S103895028	ADAMSVILLE	2 MILES WEST OF FLORENCE ON HWY 287		SWF/LF
PINAL COUNTY	S103895031	DUDLEYVILLE	3 MILES SOUTH OF WINKELMAN ON EASTSIDE OF HWY 77		SWF/LF
PINAL COUNTY	S103895039	SIERRA ESTRELLA	3 MILES NW OF TOWN OF MARICOPA ON STAT ROUTE		SWF/LF
PINAL COUNTY	S103895178	FLORENCE STATE PRISON	.25 MILES SOUTHEAST OF PRISON		SWF/LF
PINAL COUNTY	S103895181	MARICOPA #1	.8 MILES EAST OF MARICOPA RD. ON NORTH SIDE OF CAS		SWF/LF
PINAL COUNTY	S103895182	MARICOPA #2	3 MILES NORTH OF MARICOPA ON MARICOPA RD.		SWF/LF
PINAL COUNTY	S103895030	CITY OF CASA GRANDE	3.2 MILES SOUTH OF CASA GRANDE AT 5200 S. CHUI CHU		SWF/LF
PINAL COUNTY	S103895180	KELVIN/RIVERSIDE	1.3 MILES SOUTH OF AZ 177 ON MINERAL CREEK RD.		SWF/LF
PINAL COUNTY	S103895183	РІСАСНО	0.5 MILES S I-10 ON PICACHO BLVD. THEN EAST TO SIT		SWF/LF
PINAL COUNTY	S103895184	RANDOLPH LA PALMA	2 MILES SOUTH OF RANDOLPH ON AZ 87		SWF/LF
PINAL COUNTY		ADAMSVILLE FEEDLOT	.2 MILES NORTH OF MILEPOST 140 ON A		SWF/LF
PINAL COUNTY	S100293376	APACHE JUNCTION	2.6 MILES S OF AZ. 60/80/89 ON TOMA		SWF/LF
PINAL COUNTY	S100293377	CASA GRANDE	3.2 MILES SOUTH OF CASA GRANDE ON F		SWF/LF
PINAL COUNTY	S100293378		.5 MILES WEST OF AZ. 87 ON BARTLETT		SWF/LF
PINAL COUNTY	S100293379	DUDLEYVILLE	.4 MILES S OF MILEPOST 132 ON THE E		SWF/LF
PINAL COUNTY	S100293380	МАММОТН	.9 MILES N OF SAN PEDRO BRDG ON THE		SWF/LF
PINAL COUNTY		STANFIELD	1.2 MILES WEST OF MARICOPA ROAD ON		SWF/LF

#### **ORPHAN SUMMARY**

City	EDR ID	Site Name	Site Address	Zip	Database(s)
PINAL COUNTY	S103278054	OCOTILLO	NORTHSIDE OF JUDY'S RD. AND EAST ROBERT'S RD.		SWF/LF
PINAL COUNTY	S103895033	RAY COMPLEX - RAY MINE	EAST OF STATE HIGHWAY 177 10 MILES NORT OF		SWF/LF
PINAL COUNTY	S103895207	CITY OF COOLIDGE	SOUTH OF THE INTERSECTION OF BARTLETT RD. AND S.AR		SWF/LF
PINAL COUNTY	S103895185	TOWN OF MAMMOTH	OFF HWY 77 ON N END OF TOWN		SWF/LF
PINAL COUNTY	S103895177	CENTRAL ARIZONA COLLEGE	ON SIGNAL PEAK CAMPUS		SWF/LF
PINAL COUNTY	S103278491	SUPERIOR	2.1 M. SOUTH OF US 60 ON MARY DR.		SWF/LF, Dry Wells
PINAL COUNTY	S101570524	FLORENCE	ON US 80.89 .35 MILES SOUTH OF MILEPOST 138		SHWS, SWF/LF
SAN MANUEL	93338625	HWY 76 200 SOUTH REDDINGTON RD, PLANT SITE AREA	HWY 76 200 SOUTH REDDINGTON RD, PLANT SITE AREA	85631	ERNS
SAN MANUEL	1000123468	SAN MANUEL AZ RAILROAD CO	HWY 76 MCNAB RD	85631	RCRIS-SQG, FINDS, SWF/LF
SAN MANUEL	U003051832	FASTSTOP #2	HWY 76 / MCNAB PARKWAY	85631	LUST
SAN MANUEL	U003547490	SAN MANUEL HEALTHCARE CENTER	HWY 76 & MCNAB PARKWAY	85631	UST
SAN MANUEL	93333182	HWY 76, PLANT SITE AREA, ACID	HWY 76, PLANT SITE AREA, ACID	85631	ERNS
		NEUTRALIZATION AREA	NEUTRALIZATION AREA		
SAN MANUEL	96475592	ACID PLANT AREA	ACID PLANT AREA	85631	ERNS
SAN MANUEL	94418490	P.O. BOX M / PLANT SITE, ACID NEUTRALIZATION AREA	P.O. BOX M / PLANT SITE, ACID NEUTRALIZATION AREA	85631	ERNS
SAN MANUEL	S103932011	NEWMONT EXPLOR. OLD RELIABLE MINE	12 M NW OF	85631	SHWS
SAN MANUEL	94418484	145 SO. REDDINGTON RD. / PLANT SITE: ACID LOADING AREA	145 SO. REDDINGTON RD. / PLANT SITE: ACID LOADING AREA	85631	ERNS
SAN MANUEL	U003051684	MAGMA COPPER CO TOWNSITE/GOLF	26950 N REDDINGTON HWY 76	85631	UST
SAN MANUEL	94359416	145 SO REDINGTON ROAD, ACID LOADING AREA	145 SO REDINGTON ROAD, ACID LOADING ARI	85631	ERNS
WINKELMAN	U001627730	WINKELMAN TOWN YARD	104 W 1ST ST	85292	LUST, UST
WINKELMAN	U003049499	CENTRAL ARIZONA COLLEGE-ARAVAIPA	OFF HWY 77 MP 124	85292	LUST, UST
WINKELMAN	U001002647	MINIT MARKET #10 TEXACO	101 2ND ST	85292	LUST, UST
WINKELMAN	U001624829	ADOT CHRISTMAS MAINTENANCE CAMP	STATE RD SR 77 MP 144.9 LEFT	85292	LUST, UST
WINKLEMAN	1000856681	CENTRAL ARIZONA COLLEGE	STAR RTE 97 ARAVAIPA RD	85292	RCRIS-SQG, FINDS

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

#### FEDERAL ASTM STANDARD RECORDS

**NPL:** National Priority List

Source: EPA Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/30/03 Date Made Active at EDR: 06/02/03 Database Release Frequency: Semi-Annually

#### **NPL Site Boundaries**

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC) Telephone: 202-564-7333

EPA Region 1 Telephone 617-918-1143

EPA Region 3 Telephone 215-814-5418

**EPA Region 4** Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Source: EPA Telephone: N/A

> Date of Government Version: 04/30/03 Date Made Active at EDR: 06/02/03 Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/05/03 Elapsed ASTM days: 28 Date of Last EDR Contact: 05/09/03

EPA Region 6 Telephone: 214-655-6659

**EPA Region 8** Telephone: 303-312-6774

> Date of Data Arrival at EDR: 05/05/03 Elapsed ASTM days: 28 Date of Last EDR Contact: 05/05/03

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/19/03 Date Made Active at EDR: 04/08/03 Database Release Frequency: Quarterly Date of Data Arrival at EDR: 03/24/03 Elapsed ASTM days: 15 Date of Last EDR Contact: 03/24/03

#### CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Source: EPA Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 03/19/03 Date of Data Arrival at EDR: 03/24/03 Date Made Active at EDR: 04/08/03 Elapsed ASTM days: 15 Database Release Frequency: Quarterly Date of Last EDR Contact: 03/24/03 **CORRACTS:** Corrective Action Report Source: EPA Telephone: 800-424-9346 CORRACTS identifies hazardous waste handlers with RCRA corrective action activity. Date of Government Version: 03/31/03 Date of Data Arrival at EDR: 04/07/03 Date Made Active at EDR: 05/08/03 Elapsed ASTM days: 31 Date of Last EDR Contact: 03/10/03 Database Release Frequency: Semi-Annually RCRIS: Resource Conservation and Recovery Information System Source: EPA/NTIS Telephone: 800-424-9346 Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Date of Government Version: 09/09/02 Date of Data Arrival at EDR: 09/24/02 Date Made Active at EDR: 10/28/02 Elapsed ASTM days: 34 Date of Last EDR Contact: 05/09/03 Database Release Frequency: Varies ERNS: Emergency Response Notification System Source: National Response Center, United States Coast Guard Telephone: 202-260-2342 Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances. Date of Government Version: 12/31/02 Date of Data Arrival at EDR: 01/27/03 Date Made Active at EDR: 02/03/03 Elapsed ASTM days: 7 Date of Last EDR Contact: 04/28/03 Database Release Frequency: Annually FEDERAL ASTM SUPPLEMENTAL RECORDS BRS: Biennial Reporting System Source: EPA/NTIS Telephone: 800-424-9346 The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities. Date of Government Version: 12/31/99 Date of Last EDR Contact: 03/17/03 Database Release Frequency: Biennially Date of Next Scheduled EDR Contact: 06/16/03 CONSENT: Superfund (CERCLA) Consent Decrees Source: EPA Regional Offices Telephone: Varies Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters. Date of Last EDR Contact: N/A

Date of Government Version: N/A Database Release Frequency: Varies

ROD: Records Of Decision

Source: EPA

Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Next Scheduled EDR Contact: N/A

Date of Covernment Version: 04/00/02	Data of Loot EDB Contact: 04/07/02
Date of Government Version: 01/09/03 Database Release Frequency: Annually	Date of Last EDR Contact: 04/07/03 Date of Next Scheduled EDR Contact: 07/07/03
<b>DELISTED NPL:</b> National Priority List Deletions Source: EPA Telephone: N/A The National Oil and Hazardous Substances Pollution Contingency Plan (I EPA uses to delete sites from the NPL. In accordance with 40 CFR 300 NPL where no further response is appropriate.	
Date of Government Version: 04/30/03 Database Release Frequency: Quarterly	Date of Last EDR Contact: 05/05/03 Date of Next Scheduled EDR Contact: 08/04/03
<ul> <li>FINDS: Facility Index System/Facility Identification Initiative Program Summa Source: EPA</li> <li>Telephone: N/A</li> <li>Facility Index System. FINDS contains both facility information and 'pointe detail. EDR includes the following FINDS databases in this report: PCS Information Retrieval System), DOCKET (Enforcement Docket used to enforcement cases for all environmental statutes), FURS (Federal Under Docket System used to track criminal enforcement actions for all enviro Information System), STATE (State Environmental Laws and Statutes),</li> </ul>	rs' to other sources that contain more (Permit Compliance System), AIRS (Aerometric manage and track information on civil judicial erground Injection Control), C-DOCKET (Criminal inmental statutes), FFIS (Federal Facilities
Date of Government Version: 03/19/03 Database Release Frequency: Quarterly	Date of Last EDR Contact: 04/07/03 Date of Next Scheduled EDR Contact: 07/07/03
<ul> <li>HMIRS: Hazardous Materials Information Reporting System</li> <li>Source: U.S. Department of Transportation</li> <li>Telephone: 202-366-4555</li> <li>Hazardous Materials Incident Report System. HMIRS contains hazardous</li> </ul>	material spill incidents reported to DOT.
Date of Government Version: 01/31/03 Database Release Frequency: Annually	Date of Last EDR Contact: 04/30/03 Date of Next Scheduled EDR Contact: 07/21/03
<ul> <li>MLTS: Material Licensing Tracking System Source: Nuclear Regulatory Commission Telephone: 301-415-7169</li> <li>MLTS is maintained by the Nuclear Regulatory Commission and contains possess or use radioactive materials and which are subject to NRC lice EDR contacts the Agency on a quarterly basis.</li> <li>Date of Government Version: 04/23/03</li> </ul>	
Database Release Frequency: Quarterly	Date of Next Scheduled EDR Contact: 07/07/03
MINES: Mines Master Index File Source: Department of Labor, Mine Safety and Health Administration Telephone: 303-231-5959	
Date of Government Version: 03/11/03 Database Release Frequency: Semi-Annually	Date of Last EDR Contact: 03/31/03 Date of Next Scheduled EDR Contact: 06/30/03
<ul> <li>NPL LIENS: Federal Superfund Liens</li> <li>Source: EPA</li> <li>Telephone: 205-564-4267</li> <li>Federal Superfund Liens. Under the authority granted the USEPA by the C and Liability Act (CERCLA) of 1980, the USEPA has the authority to file to recover remedial action expenditures or when the property owner rec USEPA compiles a listing of filed notices of Superfund Liens.</li> </ul>	e liens against real property in order

Date of Government Version: 10/15/91 Database Release Frequency: No Update Planned	Date of Last EDR Contact: 05/27/03 Date of Next Scheduled EDR Contact: 08/25/03
<ul> <li>PADS: PCB Activity Database System</li> <li>Source: EPA</li> <li>Telephone: 202-564-3887</li> <li>PCB Activity Database. PADS Identifies generators, transporters, commercial of PCB's who are required to notify the EPA of such activities.</li> </ul>	storers and/or brokers and disposers
Date of Government Version: 03/26/03 Database Release Frequency: Annually	Date of Last EDR Contact: 05/12/03 Date of Next Scheduled EDR Contact: 08/11/03
<ul> <li>DOD: Department of Defense Sites</li> <li>Source: USGS</li> <li>Telephone: 703-648-5920</li> <li>This data set consists of federally owned or administered lands, administered have any area equal to or greater than 640 acres of the United States, Puer</li> </ul>	
Date of Government Version: 04/01/03 Database Release Frequency: Semi-Annually	Date of Last EDR Contact: 05/12/03 Date of Next Scheduled EDR Contact: 08/11/03
<ul> <li>RAATS: RCRA Administrative Action Tracking System</li> <li>Source: EPA</li> <li>Telephone: 202-564-4104</li> <li>RCRA Administration Action Tracking System. RAATS contains records base pertaining to major violators and includes administrative and civil actions be actions after September 30, 1995, data entry in the RAATS database was of the database for historical records. It was necessary to terminate RAATS be made it impossible to continue to update the information contained in the database.</li> </ul>	rought by the EPA. For administration discontinued. EPA will retain a copy of ecause a decrease in agency resources
Date of Government Version: 04/17/95 Database Release Frequency: No Update Planned	Date of Last EDR Contact: 03/10/03 Date of Next Scheduled EDR Contact: 06/09/03
<ul> <li>TRIS: Toxic Chemical Release Inventory System</li> <li>Source: EPA</li> <li>Telephone: 202-260-1531</li> <li>Toxic Release Inventory System. TRIS identifies facilities which release toxic land in reportable quantities under SARA Title III Section 313.</li> </ul>	chemicals to the air, water and
Date of Government Version: 12/31/00 Database Release Frequency: Annually	Date of Last EDR Contact: 03/25/03 Date of Next Scheduled EDR Contact: 06/23/03
<ul> <li>TSCA: Toxic Substances Control Act Source: EPA</li> <li>Telephone: 202-260-5521</li> <li>Toxic Substances Control Act. TSCA identifies manufacturers and importers of TSCA Chemical Substance Inventory list. It includes data on the production site.</li> </ul>	
Date of Government Version: 12/31/98 Database Release Frequency: Every 4 Years	Date of Last EDR Contact: 03/06/03 Date of Next Scheduled EDR Contact: 06/09/03
FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fung Source: EPA Telephone: 202-564-2501	icide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Date of Government Version: 04/15/03 Database Release Frequency: Quarterly	Date of Last EDR Contact: 03/24/03 Date of Next Scheduled EDR Contact: 06/23/03

#### SSTS: Section 7 Tracking Systems

Source: EPA

Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/00 Database Release Frequency: Annually Date of Last EDR Contact: 05/09/03 Date of Next Scheduled EDR Contact: 07/21/03

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/15/03 Database Release Frequency: Quarterly Date of Last EDR Contact: 03/24/03 Date of Next Scheduled EDR Contact: 06/23/03

#### STATE OF ARIZONA ASTM STANDARD RECORDS

SPL: Superfund Program List

Source: Department of Environmental Quality

Telephone: 602-771-4360

The list is representative of the sites and potential sites within the jurisdiction of the Superfund Program Section. It is comprised of the following elements: 1) Water Quality Assurance Revolving Fund Registry Sites; 2) Potential WQARF Registry sites; 3) NPL sites; and 4) Department of Defense sites requiring SPS oversight.

Date of Government Version: 03/17/03 Date Made Active at EDR: 05/08/03 Database Release Frequency: Semi-Annually Date of Data Arrival at EDR: 04/21/03 Elapsed ASTM days: 17 Date of Last EDR Contact: 06/02/03

Date of Data Arrival at EDR: 04/11/00

Date of Last EDR Contact: 04/21/03

Date of Data Arrival at EDR: 01/02/01

Date of Last EDR Contact: 03/31/03

Elapsed ASTM days: 35

Elapsed ASTM days: 30

SHWS: ZipAcids List

Source: Department of Environmental Quality Telephone: 602-771-4360

The ACIDS list consists of more than 750 locations subject to investigation under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The list is no longer updated by the state.

Date of Government Version: 01/03/00 Date Made Active at EDR: 05/16/00 Database Release Frequency: No Update Planned

SWF/LF: Directory of Solid Waste Facilities

Source: Department of Environmental Quality

Telephone: 602-771-4132

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/01/00 Date Made Active at EDR: 02/01/01 Database Release Frequency: Annually

LUST: Leaking Underground Storage Tank Listing

Source: Department of Environmental Quality

Telephone: 602-771-4345

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 02/14/03 Date of Data Arrival at EDR: 02/24/03 Date Made Active at EDR: 03/04/03 Elapsed ASTM days: 8 Database Release Frequency: Semi-Annually Date of Last EDR Contact: 05/13/03 UST: Underground Storage Tank Listing Source: Department of Environmental Quality Telephone: 602-771-4345 Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program. Date of Government Version: 02/14/03 Date of Data Arrival at EDR: 02/24/03 Date Made Active at EDR: 03/06/03 Elapsed ASTM days: 10 Database Release Frequency: Annually Date of Last EDR Contact: 05/12/03 WQARF: Water Quality Assurance Revolving Fund Sites Source: Department of Environmental Quality Telephone: 602-771-4360 Sites which may have an actual or potential impact upon the waters of the state, cause by hazardous substances. The WQARF program provides matching funds to political subdivisions and other state agencies for clean-up activities. Date of Government Version: 03/08/02 Date of Data Arrival at EDR: 03/25/02 Date Made Active at EDR: 04/30/02 Elapsed ASTM days: 36 Database Release Frequency: Annually Date of Last EDR Contact: 03/24/03 INDIAN UST: Underground Storage Tanks on Indian Land Source: EPA Region 9 Telephone: 415-972-3368 Date of Government Version: N/A Date of Data Arrival at EDR: N/A Date Made Active at EDR: N/A Elapsed ASTM days: 0 Database Release Frequency: Varies Date of Last EDR Contact: N/A STATE OF ARIZONA ASTM SUPPLEMENTAL RECORDS AST: List of Aboveground Storage Tanks Source: Department of Building & Fire Safety Telephone: 602-364-1003 Aboveground storage tanks that the Dept. of Building & Fire Safety have permitted. Date of Government Version: 12/31/00 Date of Last EDR Contact: 04/15/03 Database Release Frequency: Annually Date of Next Scheduled EDR Contact: 07/14/03 SPILLS: Hazardous Material Logbook Source: Department of Environmental Quality Telephone: 602-771-4153 ADEQ Emergency Response Unit. The ADEQ Emergency Response Unit documents chemical spills and incidents which are referred to the Unit. The logbook information for 1984-1986 consists of handwritten entries of the date, incident number and name of facility if known. Current logbooks are computerized and can be sorted by date, incident number, name, city (zip codes are not included), county, chemical and quantity. Date of Government Version: 06/30/00 Date of Last EDR Contact: 05/05/03 Date of Next Scheduled EDR Contact: 06/30/03 Database Release Frequency: Semi-Annually DOD: Department of Defense Sites Source: Department of Environmental Quality Telephone: 602-771-4360 These sites are federal facilities that are either being assessed for potential contamination, or have active remediation taking place on them.

Date of Government Version: 03/08/02	Date of Last EDR Contact: 03/24/03
Database Release Frequency: Annually	Date of Next Scheduled EDR Contact: 06/23/03
WWFAC: Waste Water Treatment Facilities Source: Department of Environmental Quality Telephone: 602-771-4623 Statewide list of waste water treatment facilities.	
Date of Government Version: 03/01/03	Date of Last EDR Contact: 05/27/03
Database Release Frequency: Varies	Date of Next Scheduled EDR Contact: 08/25/03
AQUIFER: Waste Water Treatment Facilities Source: Department of Environmental Quality Telephone: 602-771-4623 Waste Water Treatment Facilities with APP (Aquifer Protection Permi	ts.)
Date of Government Version: 11/01/01	Date of Last EDR Contact: 04/28/03
Database Release Frequency: Semi-Annually	Date of Next Scheduled EDR Contact: 07/28/03
<ul> <li>DRY WELLS: Drywell Registration</li> <li>Source: Department of Environmental Quality</li> <li>Telephone: 602-771-4686</li> <li>A drywell is a bored, drilled, or driven shaft or hole whose depth is gree constructed specifically for the disposal of storm water.</li> </ul>	eater than its width and is designed and
Date of Government Version: 03/26/03	Date of Last EDR Contact: 03/24/03
Database Release Frequency: Semi-Annually	Date of Next Scheduled EDR Contact: 06/23/03
AZ AIRS: Arizona Airs Database Source: Department of Environmental Quality Telephone: 602-771-2344 Arizona major (has the potential to emit over 100 tons of criteria pollur	tant) and minor (below 100 tons) sources.
Date of Government Version: 05/01/03	Date of Last EDR Contact: 05/19/03
Database Release Frequency: Semi-Annually	Date of Next Scheduled EDR Contact: 08/04/03

#### EDR PROPRIETARY HISTORICAL DATABASES

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

#### Disclaimer Provided by Real Property Scan, Inc.

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#### OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### **AHA Hospitals:**

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

#### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

#### **Nursing Homes**

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

#### Public Schools

Source: National Center for Education Statistics

#### Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical

database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

#### Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

#### **Daycare Centers: Child Care Facilities & Group Homes**

Source: Department of Health Services Telephone: 602-674-4220

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

#### STREET AND ADDRESS INFORMATION

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## **APPENDIX B**

ARIZONA DEPARTMENT OF WATER RESOURCES

> MONITORING Well Data

#### Arizona Department of Water Resources

Wells-55 Registry\*

Location	Regist	Name	Well Type	Gpm	Well Depth	Diam	Water Level	Comments	a	App/Reg Date	Dritler	H20	Drik Date
D-8-16 12 DAA	624642	BHP COPPER INC,	N	D	40	6	17			06/11/82	0	J	01/01/50
D-8-16 12 DDA	615549	AZ STATE LAND DEPT,	Ε	3	40	6	26		Y	06/14/82	0	J	01/01/47
D-8-16 12 DDD	633721	GOODMANS RANCHES	E	15	40	6	20			05/17/82	Q	D	01/01/45
								1				J	01/01/45
D-8-17 07 BB	611179	MILLER,C R	N	830	110	16	40			06/10/82	0	A	01/01/50
	Í											D	01/01/50
												J	01/01/50
D-8-17 07 CDD	588812	UNITED METRO MATERIALS, INC.	N					05/12/2003=NOT DRILLED, PER DRILLER	Y	09/06/01	211	F	
	588813	UNITED METRO MATERIALS, INC.	N					05/12/2003=NOT DRILLED, PER DRILLER	Y	09/06/01	211	F	
	588814	UNITED METRO MATERIALS, INC.	N					05/12/2003=NOT DRILLED, PER DRILLER	Ŷ	09/06/01	211	F	
	624641	BHP COPPER INC,	N	0	75	12	22			06/11/B2	0	D	01/01/44
							6					J	01/01/44
D-8-17 07 DCB	624629	BHP COPPER INC,	N	0	58	6	38			06/11/82	0	D	
												J	
	624630	BHP COPPER INC,	N	0	58	6	25			06/11/82	0	D	
					-							J	
D-8-17 07 DDC	584018	UNITED METRO MATERIALS, INC.	N						N	10/19/00	77	F	
											323	F	
D-8-17 17	644510	PETERS,FE	E	25	70	6	50	REPLACED BY 527037		05/19/82	0	D	
	646322	SANCHEZ, MARTIN, S	E	20	81	6	40			06/14/82	0	D	12/31/62
D-8-17 17 ACB	527037	PETERS, FRANK & M.,	D	13	100	4	43	REPLACES 644510		02/02/90	64	D	01/14/90
D-8-17 17 ACC	524488	CLARK, LARRY & R.,	N	12	90	4	42			05/09/89	64	D	01/30/90
0-8-17 17 CAA	400058	MERCER RICHARD DELL	E						Y	03/01/99	236	N	
		MERCER RICHARD DELL	E		100	6	62			12/31/98	236	D	04/29/99
0-8-17 17 CB	641557	SOTO,H B	E	50	70	3	0			04/16/82	0	D	01/01/73
		SOTO,R C	E	0	80	4	50			04/16/82	0	D	01/01/70
	646760	OLIVER,C M	E	15	55	4	40			06/14/82	0	D	51151/10

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#### Arizona Department of Water Resources Wells-55 Registry\*

Location	Regist		Well Type	Gpm	Well Depth	Diam	Water Level	Comments	ler	App/Reg Date	Drttler	H20	Drill Date
	646767	GARCIA A V	E	0	150	B	30		1	06/14/82	0	D	
	647295	FLOWERS,L C	E	3	65	6	60			06/14/82	0	D	09/01/73
D-8-17 17 CBB	644314	AMADOR, F M	E	14	138	6	30		-	06/09/82	0		01/01/55
D-8-17 17 CBC	807689	WEDDLE THOMAS B.	E								0	D	06/01/53
D-8-17 17 CDD	649742	WEDDLE THOMAS B.	E	30	80	8	58		+	03/12/98			
D-8-17 17 DCA	627691	CLARK,B	E	35	66	6	0	<u> </u>		06/14/82	0	D	09/29/54
D-8-17 17 DCD	627681	CLARK,B	N	1500	98	12	35		-	06/09/82	0	D ·	01/01/68
				1000	30		- 35			06/09/82	0	A	05/15/20
D-8-17 18	538204	EL PASO NATURAL GAS.	Z	0	40	0						D	05/15/20
				U	40	0	7	ABAND-3-2-93 CXL	Y	02/19/93	319	N	03/02/93
	642864	YANEZ, A C	E	12	120	6	67			06/08/82	0	D	
	646773	ALTAMIRANO, FG	E	90	100	8	0			06/14/82	0	D	
	649206	JUVERA, A G	E	20	75	4	50	· · · · · · · · · · · · · · · · · · ·		06/14/82	0	D	
	802693	MORENO, PL	E	0	103	6	0			07/25/85	0	D	01/01/50
D-8-17 18 AAB	536332	GUERRERO, ALFRED, L	E	26	108	8	40			08/10/92	300	A	09/09/92
										ouriorsz	300		09/09/92
								7			ł	D	09/09/92
													03/03/32
D-8-17 18 ADB	618780	VERDUGO,R F	N	1000	110	10	60	'		06/11/82	0	A	08/15/75
				1								D	08/15/75
										1	H	J	08/15/75
D-8-17 18 ADC	623962	VERDUGO,CO	N	600	125	10	60			06/09/82	0	A	01/31/45
						and the second							01/31/45
	623963	VERDUGO,CO	E	3	110	10	50		- +	06/09/82	0	D	07/01/44
0-8-17 18 ADD	623961	VERDUGO,CO	N	150	110	8	70			06/09/82	0	D	07/01/75
D-8-17 18 B	637858	THRASHER, SE	E	10	40	6	20			06/14/82	0	D	04/01/64
0-8-17 18 C		YANEZ, A C	E	20	120	6	60		-	05/19/82	0	D	06/01/67
)-8-17 18 CAB	643593	KERR,T H	E	18	200	0	65		-+	06/02/82	0	D	01/01/40
	643594	KERR,TH	E	18	206	8	60		-	06/02/82	0	D	
0-8-17 18 CAD	629355	PEARSON, RE	E	0	260	8	50			02/09/82	0	D	01/01/58
-8-17 18 CBB	637857	THRASHER,SE	E	25	125	6	0			06/14/82	0		01/01/77
-8-17 18 CCC	646763	KNIGHT, CF	E	35	55	4	17		-	06/14/82	0	D	12/04/78
-8-17 18 CD	647774	JUVERA, MV	E	35	85	8	25		-+	06/14/82		D	10/01/64
	649760	PENA, J D	E	5	300	8	60			06/14/82	0	D	01/01/74
	651261	MAMMOTH, TOWN OF #3,	N	100	340	0	71		-+-		0	0	04/20/80
•		GARCIA,M	E	0	0	0	0		-	04/07/82	0	E	
-8-17 18 CDA	528575	BENAGLIO	×	0	75	4				07/27/83	0	D	
		ENTERPRISES,	1				••			06/25/90	319	M	07/31/90

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#### Arizona Department of Water Resources Wells-55 Registry\*

Location	Regist		Well Type	Gpm	Well Depth	Diam	Water Level	Comments	CX	App/Reg Date	Driller	H20	Drill Date
1	528576	Benaglio Enterprises,	x	0	78	4	70	INC/NOA		06/25/90	319	M	08/01/90
	528577	BENAGLIO ENTERPRISES,	×	0	78	4	72	INGINOA		06/25/90	319	м	08/02/90
	528578	BENAGLIO ENTERPRISES,	x	0	0	0	٥	INCCXL	Y	06/25/90	319	м	
	534802	BENAGLID ENTERPRISES,	x	0	92	4	69	NOA		03/31/92	28	м	04/02/92
	534803	BENAGLIO ENTERPRISES,	x	0	92	4	70			03/31/92	28	м	04/02/92
	534804	BENAGLIO ENTERPRISES,	X	0	92	4	70			03/31/92	28	M	04/02/92
	534805	BENAGLIO ENTERPRISES,	х	0	0	0	0	NOT DRILLED CXL	Y	03/31/92	28	м	
	807355	BENAGLIO, CHARLES,	x	0	73	2	0	NOA ONLY		08/23/96	498	N	
		BENAGLIO, CHARLES,	Z	0	71	2	0	NOTONLY		08/23/96	498	N	
D-8-17 18 CDB		BENAGLIO, CHAPLES,	Z	0	0	0	0	15 HOLES		06/17/94	214	N	
		BENAGLIO, CHARLES,	x	0	0	0	0	NOA		12/19/94	214	M	
	547055	BENAGLIO, CHARLES,	X	0	0	0	0			12/19/94	214	M	
	553268	BENAGLIO, CHARLES,	Z	0	70	0	1	4 HOLRD/ABND-5-9-9( CXL	Y	04/03/96	498	N	05/09/96
	618519	SMITH,R A	N	0	100	8	20			06/14/82			
D-8-17 18 CDC	646226	JACOBSON, FL	E	0	390	8	35		-	06/11/82	0	-	
D-8-17 18 DAD	565 <b>67</b> 2	ALVAREZ BILL Y	E		177	5	90		1	11/18/97	0 236	D	02/04/98
	807632	ALVAREZ BILL Y	E		60	8			Y	11/18/97	236	P	
0-8-17 18 DBA	646225	DAVIS	E	0	125	6	81			06/11/82	0	D	09/09/78
0-8-17 19 DBB	603818	DUNGAN,C M	E	20	200	8	0		-	02/03/82	0	D	01/01/64
	603819	DUNGAN,C M	N	0	100	10	30			02/03/82	0	A	01/01/54
												Ĵ	01/01/54
D-8-17 18 DBC		MIRANDA, R F	E	25	330	7	21			06/14/82	0	D	12/08/78
0-8-17 18 DBD		COWAN, C F	E	0	65	6	0		-	06/14/82	0	D	01/01/68
-8-17 18 DC	651262	MAMMOTH, TOWN OF #4,	N	200	306	8	20		-	04/07/82	0	E	

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#### Arizona Department of Water Resources Wel/s-55 Registry\*

Location	Regist		Well Type	Gpm	Well Depth	Diam	Water Level	Comments	CX	App/Reg Date	Driller	H20	Driff Date
	651263	MAMMOTH, TOWN OF #5,	N	350	150	0	40			04/07/82	0	E	
	801443	MAMMOTH, TOWN OF,	N	230	120	8	50	WATER		04/23/84	0	E	10/01/40
D-8-17 18 DCC	086533	AZ PUBLIC SERVICE,	E	0	100	٥	0		-	12/01/80	20	B	12/22/80
	589385	GALLEGO CARLOS B	Е						Y	10/12/01	300	D	122200
	627546	BUZAN, ROBERT,A	N	35	60	10	25			02/09/82	0	A	12/31/58
	648254	BUZAN,RA	E	35	60	10	25			004400		7	12/31/58
D-8-17 18 DDB	633009	AVECHUCA, A E	E	20	400	6	30			06/14/82	0	A	01/01/58
0-8-17 19	637142	MARCUM, J H	E	21	147	8				04/05/82	0	D	03/30/79
	643379	CHAVEZJ	E	12	100	6	30		-	06/11/82	0	D	09/04/72
	646323	VERDUGO,F J	E	0	45	6			-	06/03/82	0	D	
	646945	WASKOSR,DD	E	0	90	8	40		+	06/14/82	0	D	01/01/49
	646946	WASKOSR,D D	E	16	250	6	170		_	06/14/82	0		
	646947	WASKOSR,D D	E	0	140	10			-	06/14/82	0	D	01/01/65
	649201	CHAVEZ TOMMY & LEAH	E	20	150		90			06/14/82	0		01/01/67
			E	20		6	0			06/14/82	0	D	01/01/64
	649369	BAUGHER,SE	E		150	6	0			06/14/82	0	D	01/01/64
	0,0000	CAUCIEN,SE	E	10	330	8	O			05/14/82	0	A	_
	650443	STARLING, P W	E									D	
		VERDUGO,R F	E	0	. 0	0	0			06/22/82	0		
		VERDUGO,R F	E	15	160	6	60			06/21/82	0	D	01/01/40
D-8-17 19 AB	649694	FULLMER,L		0	70	2	60		+	06/21/82	0	D	01/01/20
D-8-17 19 ABB		FORMO.G W	E	27	90	B	40			06/14/82	0	D	08/13/71
South 19 ADD	043410		E	35	100	8	35			06/14/82	0	A	05/01/68
0-8-17 19 ABD	806853	IOUNICTON COD										D	05/01/68
0-8-17 19 ACD		JOHNSTON, BOB,	E	18	255	6		& BEE	j	06/28/94	0	D	12/31/64
-8-17 19 AD		JUVERA, JA	E	30	130	8	80			06/14/82	0	D	04/15/75
-8-17 19 AD		BURNEY,LD	E	10	120	6	30			06/14/82	0	D	01/01/17
-8-17 19 BA	1	ANZINGER,WG	E	0	0	0	0			06/25/82	0	D	
-6-17 19 DA		MAMMOTH S MANUEL SCH,	N	150	348	8	109			06/14/82	0	A	07/01/55
-8-17 19 BBA	602262	BROWN, J	E	5	305	6	230			01/21/82	0	D	07/01/79
	620428	MADRID, P V	E	10	350	6	275			02/17/82	0	D	06/21/80
	630035	BROWN,S	E	1	350	6	260			02/25/82	0	0	
	647468	FLETCHER, FW	E	15	235	8	35		++	06/14/82	0		12/01/79
-9-17 19 BBB	086924	BROWN, LANE,	E	0	345	8		SWL 203		02/10/81	0	D	06/01/77 04/29/81
	629522	TELLES,RC	E	23	312	6	220		+				
-8-17 19 BBC	1 1	CHAVEZ,M M	E	0	320	6	260		+	02/26/82 09/24/97	0 501	D	03/21/80 01/01/82

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#### Wall- FC D 14 4

Wells-55 Registry\*

Location	Regist		Well Type	Gpm	Well Depth	Diam	Water Level	Comments	Cr	App/Reg Date	Driller	H20	0-11 0-1
	602864	YANEZ,A C	E	12	300	6	230	I this well has been replaced by 55-597364		02/16/82	0	A	Drill Date 04/19/76
												D	04/19/76
	620579	WINGARD,L	E	19	400							J	04/19/76
	643617	PLACENCIA,F	E	19		6	350		$\perp$	02/05/82	0	D	07/28/78
D-8-17 19 BBD	529492	BENAGLIO, CHARLIE,	D	i 0	380	6	120		-	06/02/82	0	D	01/01/76
		SANCHEZ,T F	E		0	0	0	CXL	Y	09/11/90	64	D	
D-8-17 19 BCC		MARTIN,M D	E	18	320	6	260			06/10/82	0	D	03/21/77
		MARTIN, MICHAEL.D	E E	0	0	0	0	CXL	Y	06/15/82	186	D	
		ACLKINSON,D W	E	0	0	0	0	CXL	Y	09/26/85	332	D	
		PIERSON, J G		0	380	6	280		Í	02/03/82	0	D	02/08/75
		PIERSON, J G	<u>٤</u>	25	306	6	240			06/16/82	0	D	08/25/75
D-8-17 19 BDC		MONTANO, G T	E	25	306	6	240			06/16/82	0	D	08/25/75
D-8-17 19 CBC		ANDERSON, FLINT,	E	18	200	6	145	]		06/11/82	0	D	06/23/69
	350015	ANDENSON, PLINE,	E	10	430	8	380	& EDITH		01/29/93	360	D	09/13/93
D-8-17 19 CCA	597364	FANNIE MAE	E						+	02/19/03			
D-8-17 19 CCD	503025	PAREDEZ, AS	E	0	0	0	0	CXL	Y	06/10/82	642	D	
	633118	MADRID,S Q	E	16	280	6	237	ONE		05/06/82	164	D	
D-8-17 19 CD	503167	MANUES, Q R	E	0	0	0	0	CXL	IV I		0	D	11/20/80
D-8-17 19 DA	646759	PETERSON,L M	E	15	190	8	100	- Critte		06/21/82	164	D	
	646761	OLIVER, C M	E	15	163	6	75		+	06/14/B2	0	D	01/01/68
	646764	GORHAM,M P	E	0	190	6	90		+ $+$	06/14/82	0	D	01/01/68
	650435	WEABER,J	E	0	0	0	0	-	+	05/14/82	0	D	
D-8-17 19 DAA	624623	BHP COPPER INC,	NÍ	0	160	12	10			07/16/82	0	A	
	896318	TOWN OF MAMMOTH	N	700	125	8		DRILLED IN 1936	+	06/11/B2	0	F	01/01/58
							-	BY ARIZ MAINT CO		01/24/03		F	
												1	
			ĺ					(AS PER WELL					
						~		OWNER INFO)					
								THIS WELL WILL					
	1							BE GIVEN TO THE					
								TOWN OF					
	·						1	MAMMOTH.				1.1	1

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#### Arizi sparti i Wat ource Wells-55 Registry\*

Location	Regist	Name	Well Type	Gpm	Well Depth	Diam	Water Level	Comments	cx	App/Reg Date	Driller	H20	Drill Dat
i			N	700	125	8	15	DRILLED IN 1936 BY ARIZ MAINT CO (AS PER WELL OWNER INFO) THIS WELL WILL		01/24/03		F.	
	3							BE GIVEN TO THE TOWN OF MAMMOTH.		Ĩ			
D-8-17 19 DAB	800088	JOHNSON, J R	E	35	40	6	30			09/28/82	0	D	
D-8-17 19 DAC	646637	MATHIESON,W	E	9	118	8	56			06/14/82	0	D	01/01/40
D-8-17 19 DAD	086532	AZ PUBLIC SERVICE,	E	0	0	0	0			12/01/80	20	B	01/01/40
-	648278	YANDELL,W	E	0	0	0	D			06/14/82	0	D	
D-8-17 19 DB	650373	TAMAYO,JO	E	0	100	0	85			06/21/82	0	D	00/00/40
D-8-17 19 DBC	553383	CIRCLE K STORES #851	X	0	100	4	50		Y	12/06/95	· 78	M	08/08/40 05/15/96
	553 <b>384</b>	CIRCLE K STORES 853,	Х	0	0	0	0			12/06/95	28	M	
	553385	CIRCLE K STORES 853,	x	0	0	0	0			12/08/95	28	M	
	553386	CIRCLE K STORES 853,	X	0	0	0	0		-	12/06/95	28	M	
	571304	SOUTHWEST GAS CORPORATION	С	ĺ	260		35			11/04/98	272	N	
	61 1493	GARCIA, RITO,G E	E	5	180	6	120 -			05/26/82	292 0	N A	01/01/55
0-8-17 19 DBD	649084	CANTINO, LA								-		D	01/01/55
		CANTINO, LA	E	20	210	8	100			06/14/82	0	D	01/01/68
		CLARK,HH	E	10	80	6	10			06/14/82	0	D	01/01/48
-B-17 19 DCA		DAWSON,G B	E	30	140	8	60			07/16/82	0	D	
-8-17 19 DD		PETTITT,LO	E	30	155	8	40			02/16/82	0	D	10/01/76
		PETTETT,LO	E	10	130	6	10			06/03/82	0	D	01/01/65
		MAMMOTH, TOWN OF #2,	E	10	130	6	0			06/03/82	0	D	07/01/78
-8-17 19 DDA	1	GORHAM,J	N	105	295	12	90			04/07/82	0	E	
-8-17 19 DDB	1	RAMSEY,B C	E	20	170	6	65			06/14/82	0	D	09/01/67
		VINDIOLA,A M	E	20	150	6	0			03/22/82	0	D	01/01/64
-8-17 19 DDC	1	MULLER,R F	E	0	160	6	80			06/07/82	0	D	09/10/66
-8-17 19 DDD	1 1		<u> </u>	34	210	8	90		1	06/07/82	0	D	01/01/69
-8-17 20 DB		YANDELL,W NEWMONT	E	0	210	8	90			06/14/82	0	D	01/01/79
		EXPLORATION,	E	14	100	8	0			06/02/82	0	D	01/01/72
-8-17 29 ACA	624643	BHP COPPER INC,	N	0	0	0	12			06/11/82	0	D	
8-17 29 DDA	624625	BHP COPPER INC,	N	0	100	18	17			06/11/82		J	

+100well brw

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#### Arizona Department of Water Resources Wells-55 Registry\*

Location	Regis		Well Type	Gpm	Well Depth	Diam	Water Level	Comments	Cr	App/Reg Date	Driller	H20	Drill Dat
D-8-17 32 ADD	624632	BHP COPPER INC,	N	0	1485	12	1	This well was drilled	-	06/11/82	0	1	02/15/34
								in 1934 and is		CONTROL	0		02/15/34
								artesian. Water					
								spilling from the well					
								casing reportedly					
			1					has a temperature					
								of 38.6 degrees					
								Celcius.					
								Groundwater					
	i		1					chemistry - very soft					
								with elevated levels					
								of ph and fluoride					
								is suggestive of a				~	
								chemically-closed			1		
								system (Ambient	1			1	
								Groundwater Quality					
0-8-17 33	643049	FRANCO, ROBERT JR.,	E	9	100	8		& CLARA	-+	050000			
	649698	TUDOR, ROY,L	E	25	93	6	50	BURTON,		05/27/82	0	D	05/21/71
								JUANITA		06/14/82	٥	D	09/15/78
	805109	MIKELS, ISSAC,M	N	1800	120	8	25		-+	10/14/07			
										12/14/87	0	A	06/24/73
												D	06/24/73
0-8-17 33 AC	600287	WALKER,C G	N	0	63	5	37		-	11/23/81		J	06/24/73
-8-17 33 BDB	530003	MIKELS, ISAAC,M	D	15	120	6		& JOAN A	-+	11/01/90	0 300	D	01/01/27
										11/0/1/90	300	*	12/17/90
											-	- +	10/12/201
				1									12/17/90
	530004	MIKELS, ISAAC,M	D	15	100	6	47	& JOAN A	-+	11/01/90	000		
										11/01/90	300	<b>^</b>	12/26/90
											+	_+	
				1								D	12/26/90
-8-17 33 DB	646923	EREKSON,R	E	15	100	6	501			064455			
	806352	MCROBERTS, EDITH,V	N	0	110	8	20			06/14/82	0	D	10/01/79
									1	06/09/92	0	A	12/31/79
							1				-	D	12/31/79
8-17 33 DBC	604260	DAVIS,A N	E	35	65	6	60		1	00//780		J	12/31/79
	604261	DAVIS,A N	N	600	210	14	60		+	02/17/82	0	D	
8-17 33 DC	619152	LEYBAS,RM	N	0	60	6	30		+	02/17/82	0	J	
8-17 33 DCB		LEYBAS RAYMOND M	E	0	175	6	60		+	06/11/82	0	A	
B-17 04 AA		MERCER, VIRGIL,E	E	20	150	8	80			08/18/97	307	D	

### Jebai ot Mi jeonu

Wells-55 Registry\*

MI

Location	Regist	Name	Well Type	Gpm	Well Depth	Diam	Water Level	Comments	cx	App/Reg Date	Driller	H20	Drill Date
			_									J	01/01/25
D-9-17 04 ADC	607865	MERCER, VIRGIL,E	N	1500	130	14	43			05/12/82	0	Δ	01/01/52
	607867	MERCER, VIRGIL,E	N	3000	150	20	43			05/12/82	0	4	01/01/52
D-9-17 04 CDA	624636	BHP COPPER INC,	N	0	16	8	8		1	06/11/82	0	<u>,</u>	01/01/52

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#### 11/9/99

## ARIZONA DEPARTMENT OF WATER RESOURCES WELL REGISTRATION REPORT CODE DEFINITIONS - Wells-55 Report

#### QUAD: B = TOWNSHIP NORTH, RANGE WEST A = TOWNSHIP NORTH, RANGE EAST C = TOWNSHIP SOUTH, RANGE WEST D = TOWNSHIP SOUTH, RANGE EAST

LOCATION is given as Quad-Township-Range Section Q1 Q2 Q3

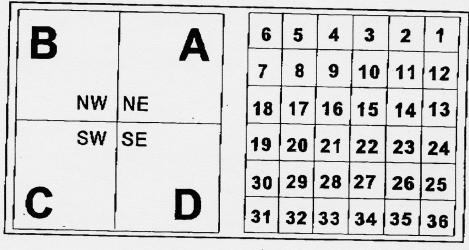
Q1 IS A QUARTER SECTION (160 ACRES) Q2 IS A QUARTER OF A QUARTER SECTION (40 ACRES) Q3 IS A QUARTER OF A QUARTER/QUARTER SECTION (10 ACRES)

QTR CODES: A = NE B = NW C = SW D = SE

#### TYPE = Type of well:

A= RECOVERY D= DOMESTIC STOCK EXEMPT E= EXEMPT N= NON-EXEMPT O= NON-DOMESTIC EXEMPT P= WITHDRAWAL PERMIT Q= REPLACEMENT WELL IN NEW LOCATION S= SERVICE T= NON-SERVICE X= MONITOR OR PIEZOMETER Z= EXPLORATION C= CATHODIC G= GEOTECHNICAL R= GROUNDING H= HEAT PUMP MN= MONITOR PZ= PIEZOMETER MI= MINERAL EXPLORATION B= INJECTION VZ= VADOSE ZONE VR= VADOSE ZONE FOR RECHARGE F= NON-EXEMPT SUMP PUMP, TRENCH OR SAND POINTS

### **GPM** = PUMPING CAPACITY OF WELL IN GALLONS PER MINUTE WTR LVL = DISTANCE IN FEET FROM THE LAND SURFACE TO WATER



### DEPTH = THE DEPTH OF THE WELL IN FEET DIAM = THE DIAMETER OF THE CASING IN INCHES

COMMENTS gives extra notes about the well. Note that ICO stands for In Care Of, but may include other helpful notes; also note that IPQ:CXL indicates the well was not drilled or was abandoned, and the registration has been cancelled.

Driller = ADWR Driller License Number cx indicates the well registration has been cancelled.

App/Reg Date: On existing wells, the date listed refers to when the well was registered with ADWR. On new wells, the date refers to when the owner applied to drill the new well.

### WLL = WELL/SITE USE CODES:

A=ANODE B=GROUNDING C=CAPPED D=DRAINAGE E = UNKNOWN G=GEOTECH HOLE H=HEAT RESERV. M=MINERAL EXPLOR. N=CATHODIC O=OBSERVATION/MONITOR P=PIEZOMETER Q=MONITOR R=RECHARGE S = SEISMIC T=TEST HOLE U=ABANDONED W=WATER PRODUCTION X=WASTE DISPOSAL Z=DESTROYED

#### H20 = WATER USE CODES:

A=IRRIGATION B=UTILITY C=COMMERCIAL D=DOMESTIC E=MUNICIPAL F=INDUSTRIAL G=RECREATION H=SUBDIVISION I=MINE J=STOCK K=EXPLORATION L=DRAINAGE M=MONITOR N=NONE O=OTHERS R=RECHARGE T=TEST V=DEWATERING

TOTAL P

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ADWR

TAMA

# **APPENDIX C**

COOPER AERIAL SURVEYS COMPANY

> HISTORICAL AERIALS

## **APPENDIX D**

GROUND SITE PHOTOGRAPHS



Photo 1. Site Overview. Photo taken from the north end of the property; view to the northwest.



Photo 2. Site overview. Photo taken from the north end of the property; view to the north.



Photo 3. Site overview. Photo taken from Section 20. A characteristic view of mesquite bosque understory.

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 1



Photo 4. Site overview. A characteristic view of the San Pedro River: view from the north end of the property.



Photo 5. Site overview. Photo taken from the east central property boundary in Section 17; view to the southwest.



Photo 6. Site overview . Smelter Wash on the southwest portion of the property, Section 4; view to the northwest.

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 2



Photo 7. Site overview. Photo taken from the Southwest portion of the property, Section 4; view to the north.



Photo 8.

Site overview. Photo taken from the southwest portion of the property, Section 4; view to the northwest.



Photo 9. Site overview. A view of recently cleared mesquite bosque; offsite in Section 3.

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 3



Photo 10. Site overview. A view of willow stands in the San Pedro River Channel; Section 4.



Photo 11. Patton Ranch; abandoned corrals.



Photo 12. A well-fed watering hole near property the boundary near the northwest corner of Section 20 (presumed offsite).

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 4

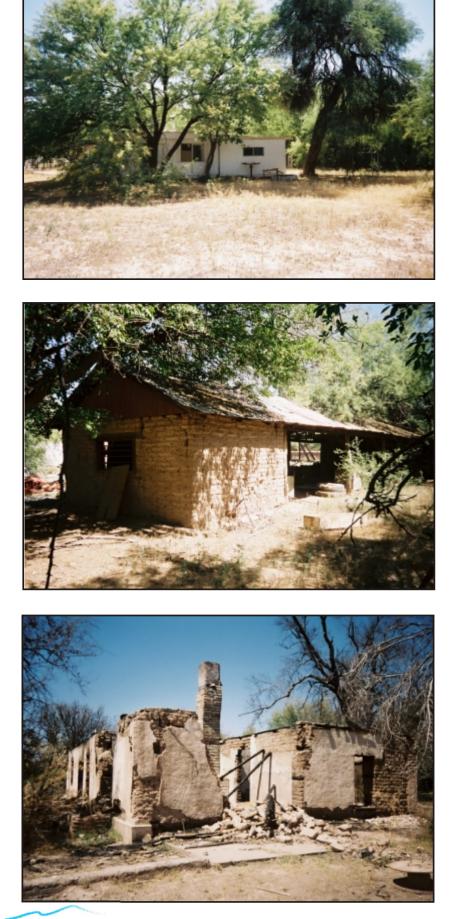


Photo 13. 7B Ranch. An onsite structure (mobile home).

Photo 14. 7B Ranch. An onsite structure.

Photo 15. 7B Ranch. An onsite structure.

Resolution Copper Company San Pedro River Phase I ESA

SELECTED PHOTOGRAPHS Sheet 5



Photo 16. 7B Ranch. An onsite structure.



Photo 17. Site overview. Abandoned agricultural land at 7B Ranch.



Photo 18. 7B Ranch. Junked cars.

Resolution Copper Company San Pedro River Phase I ESA

> SELECTED PHOTOGRAPHS Sheet 6



Photo 19. 7B Ranch. Characteristic waste drums.

Photo 20. 7B Ranch. Characteristic waste drums.

Photo 21. 7B Ranch. An example of agricultural chemical waste.

Resolution Copper Company San Pedro River Phase I ESA

> SELECTED PHOTOGRAPHS Sheet 7



Photo 22. 7B Ranch. Abandon equipment.

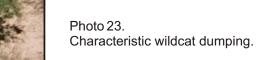




Photo 24. Characteristic wildcat dumping; Section 12.

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 8



Photo 25. Characteristic wildcat dumping; Section 17.



Photo 26. A view to the adjoining site, Mammoth wastewater treatment facility; NW1/4 of Section 18.



Photo 27. A view of the adjoining solid waste facility located northeast of Mammoth, Arizona; Section 19.

> Resolution Copper Company San Pedro River Phase I ESA

> > SELECTED PHOTOGRAPHS Sheet 9